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INTRODUCTION TO INDIAN TEXTUAL CRITICISM

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WITH

APPENDIX II

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**TO
MY WIFE**

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P R E F A C E

It was in the year 1937, when Mr. P. K. GODE and I were engaged on founding two monthly journals in the Oriental field (the *Oriental Literary Digest* and the *New Indian Antiquary*) that we repeatedly requested Dr. V. S. SUKTHANKAR to enlarge his *Prolegomena* to the critical edition of the Adiparvan of the Mahabharata into a full-fledged Introduction to Indian Textual Criticism. We were deeply conscious of the paucity of critical editions of Indian classical texts, and the large number of texts which were being published everywhere in India showed very little acquaintance with the modern critical methods of editing them. It was natural for us to approach one who, by his life-long labours as well as by his critical training under one of the most distinguished scholars of Europe, had established for himself and Indian textual criticism a unique reputation in the world of scholarship, and won recognition for the scientific principles of Indian textual criticism which he had patiently worked out in the cause of the Great Epic. Little did I dream at the time that that task would ultimately fall to my share, and I here place on record my regret that the book which should have been written by Dr. SUKTHANKAR with his unrivalled knowledge of Indian texts is now being substituted by the present work,—I hope temporarily. I still wish that Dr. SUKTHANKAR would find some leisure from his

arduous task of editing the Great Epic and bring out a standard Handbook of Textual Criticism for Indian classical texts, giving us the advantage of his unique experience and unrivalled knowledge. In the meantime the present Introduction is meant as a 'stop-gap'.

With the increasing interest shown by Indian scholars in editing their ancient classics from manuscripts preserved in India or abroad, be they in Sanskrit, Prakrit or modern Indian languages, the need of a short manual giving the main principles of textual criticism and showing the proper methods of critical editing is greatly felt. With very few exceptions the critical editing of texts in India is lagging behind, and the editors have neither the training nor the proper guidance to qualify them for their task.

Some of the European books on textual criticism give a few hints, but they take into account only European conditions where the literary tradition has been better preserved. The critical edition of our Great Epic, the Mahabharata, by the Bhandarkar Oriental Research Institute has shown that the science of textual criticism as developed by Europeans does not solve all our Indian problems and that certain adaptations are necessary for our conditions.

The aim of the present Introduction is to show with reference to Indian conditions the principal features of the science of textual criticism, in so far as it can be a science, and thus enable future editors to master the modern methods of critical editing. It is hoped that when our Universities raise the level of Indian classical studies to that of classical studies in Europe, the subject

of textual criticism will form part and parcel of the equipment of every scholar in this subject passing through the portals of the Universities.

In this manner the vast store-house of unpublished manuscripts still reposing in the archives and libraries of India may find the light of day in a critical garb and integrate the efforts, both of individuals and of institutions, in bringing the masterpieces of ancient and medieval India to all scholars in the modern world.

It is a matter of coincidence that while writing this short Introduction I am holding the chair of Indo-European Philology in the Deccan College Research Institute. It is too well-known to need specific mention here that the Deccan College became the repository of the manuscripts collected by the Government of Bombay, chiefly through the agency of the Professors of Sanskrit in this college, and with the establishing of the Bhandarkar Oriental Research Institute the entire Government Collection was transferred to that Institute. The work of collection spread over half a century, and part of these Mss. have been critically or otherwise edited ; but the large number of Mss. which are still unedited demand the concerted labours of generations of scholars. I hope and pray that this short Introduction may induce some of our promising young scholars to edit critically a few of the important texts which otherwise will remain unnoticed for the simple reason that they are not available in reliable editions. If this Introduction serves that little purpose my object in writing it will be served, and a beginning made to appreciate the great labours of such eminent scholars like the late Sir Ramakrishna Gopal

BHANDARKAR and Professors BUEHLER and KIELHORN, to mention a few only. In this sense I consider the present work as a small offering to their memory.

There is no claim to originality in this work ; the labours of my predecessors have amply provided me with all the material I needed, and I have indicated the major works which I have constantly referred to in the section on bibliography. But to SUKTHANKAR's Prolegomena, POSTGATE's two brilliant articles on textual criticism contributed to the Encyclopaedia Britannica and the Companion to Latin Studies and JEBB's article on the same subject in the Companion to Greek Studies and finally to HALL's Companion to Classical Studies I am particularly indebted. The extent of my indebtedness cannot be measured in terms of references to these works in the footnotes ; and I have read and consulted them so often that much of their thoughts and expressions and even sentences have crept in unconsciously in my own writing. It is meet, therefore, that I should render my special thanks to these authors at this juncture.

There is much work to be done with reference to textual criticism in India. The existing Descriptive Catalogues give us a good deal of information about the Mss., but we have no history of Mss., or even an attempt towards linking up the different exemplars of a given text. One of the most urgent needs of the science is this aspect of a critical catalogue of Mss. giving *stemmata codicum* of all the texts, a work which requires the co-operation of a large body of scholars working under a central organisation. Perhaps the permanent body of the All-India Oriental Conference may at some future date undertake this responsibility. In the mean-

time I would like to appeal to readers of this book to commence the work and publish their papers in the various Oriental Journals now in existence, side by side with their editorial activities.

There are many things lacking in the present work. One of the important aspects is concerned with palaeography, and particularly with the characters in each script which are liable to more than one interpretation in the scribe's proneness to errors of a visual nature. But as I have reserved this study of Historical Palaeography of Indian Manuscripts for a separate treatise, I have eschewed it from the present work. If ever a second edition becomes necessary I hope to revise this work in the light of further suggestions, and make it even more useful than it is at present.

There now remains to me the pleasant duty of acknowledging the help I have received in the execution of this work. First and foremost I have to thank Dr. V. S. SUKTHANKAR whose constant guidance and collaboration in the many tasks which I set before myself have ever been a source of inspiration to me. But for him I would not have ventured to enter this field. Whatever good points there may be in this work are mostly due to him, but for any shortcomings I alone am responsible. He has not only read the original typescript of this work and made valuable suggestions and saved me from a number of errors, but has also gone over the proofs. To my colleague and inseparable companion, Mr. P. K. GODE, I have never looked in vain for help and encouragement. His ready co-operation has added a valuable chapter to this work in the shape of Appendix II, and he has read over the proofs and helped me in

every possible way. The eight years of our acquaintance have been the most fruitful in our lives, and since 1937 our joint labours for the cause of Indology have found shape in much editorial activity. I cannot thank him enough for his goodness and collaboration which have made possible many of the ambitious projects which I initiated and brought to a successful conclusion.

My thanks are also due to Principal R. D. KARMARKAR for his constant encouragement while I was serving as Professor of Sanskrit Languages in the S. P. College and for placing at my disposal many inaccessible publications since I have known him. To Dr. I. J. S. TARAPOREWALA I have to express my special thanks for letting me have the free use of his personal library ; similarly Dr. P. M. JOSHI kept at my disposal for as long as I required most of the books needed by me from the University Library, and I hereby tender him my most sincere thanks.

Above all I have to offer my thanks to Mr. M. N. KULKARNI of the Karnatak Publishing House, and the Karnatak Printing Press for giving this excellent appearance to the work. Both as Publishers and Printers of the *New Indian Antiquary* they have upheld their great tradition for artistic printing and special regard for scholarly endeavours in the face of uneconomic production, and it is indeed a pleasure to me to dedicate the present work to the noble cause which they have undertaken.*

* The sale proceeds of this work will be devoted to the promotion of the *New Indian Antiquary*.

Finally I have to acknowledge my indebtedness to the University of Bombay for the substantial financial help it has granted towards the cost of the publication of this book.

S. M. KATRE

Vijayadasami

30th September, 1941

Deccan College Research Institute,

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CHAPTER V

CAUSES OF CORRUPTION IN A TRANSMITTED TEXT

All that a proper recension of a text does is to report the evidence of the documents, which are the primary witnesses to the text so transmitted, and to decide which documents are the most trustworthy owing to their age or character. In most cases this brings us appreciably nearer the autograph; still it always leaves a residuum of passages, greater or less in number according to the character and history of the text in question, which no longer present the words which the author originally wrote. Such passages are usually described as 'corrupt' and before we allow such corruptions to remain in the text we must consider whether they can be removed or 'emended'. If it be proved that some portion of a text has disappeared without leaving any trace behind, the injury is irreparable, and the editor should then carefully mark the lacuna in his text. But a majority of corrupt passages are instances where the text has been defaced but not entirely destroyed, and can be restored with more or less probability by emendation.

In order then that we may succeed in restoring our text from the evidence available, including such evidently corrupt passages, we must know and weigh the causes which tend to vitiate it in its various kinds.

We have already indicated that the corruptions which find their way in transmitted texts are either visual and psychological, accidental or deliberately made, and involuntary, semivoluntary or voluntary. No appeal to experience has so far enabled critics to frame exhaustive categories of transcriptional error or license. It is impossible, as JEBB remarks, to draw up a list of the motives which might lead to wilful change, or of the accidents which might lead to blunders, for the organs of the tradition were not machines.

but men. Of course experience teaches that the various types of faults considered below have different frequencies, and in case of doubt, different probabilities. In order to secure a sound foundation for this department of textual criticism, one must prepare, for the individual periods of time, types of literature and the regions of writing, on the basis of such manuscripts whose source is actually extant (and whose readings will in general be eliminated in our critical editions), a statement of all the individual faults, arranged according to types; then one must proceed to the individual faults of such manuscripts whose source can be reconstructed with certainty through recension; in this case the first thing to do is to separate those manuscripts whose source can be constituted by selection from those whose source can only be arrived at by 'divination' or conjecture.

As matters stand at present these errors may be classified in several ways. Adapting the system of classification followed by HALL, we have errors arising from :

I. Confusions and attempts made to remedy them :

- (1) Confusion of similar letters and syllables.
- (2) Mistranscription of words through general resemblance.
- (3) Misinterpretation of contractions.
- (4) Wrong combination or separation.
- (5) Assimilation of terminations and accommodation to neighbouring construction.
- (6) Transposition of letters (anagrammatism) and of words and sentences; dislocation of sentences, sections and pages.
- (7) Mistranscription of Sanskrit into Prakrit or Vernacular and vice versa.
- (8) Mistake due to change in pronunciation.
- (9) Confusion of Numerals.
- (10) Confusion in Proper Names.
- (11) Substitution of synonymous or familiar words for unfamiliar.
- (12) New spellings substituted for old.
- (13) Interpolation or the attempt to repair the results of unconscious errors.

(14) Haplography, or the omission of words or syllables with the same beginning or ending (*homoeocrecta* and *homoeoteleuta*).

- ### III. Additions.

- (16) Repetition from the immediate (Dittography) or neighbouring context.
- (17) Insertion of interlinear or marginal glosses or notes (Adscripts).
- (18) Conflated readings.
- (19) Additions due to the influence of kindred writings.

A few of these errors will be illustrated below. In the degree in which the volition of the scribe is absent or present we shall arrange them as involuntary (or mechanical), semi-voluntary and voluntary.

Errors of the eye.

(a) Confusions of Letters. This is purely a question to be settled by palaeographical evidence. For instance in the Devanāgarī peculiar to the Jains there is frequent interchange between the following : (i) *c*, *v* and *b* ; (ii) *tth* and *cch* ; (iii) *th* and *gh* ; (iv) *bbh* and *jjh* and (v) *dd*, *ddh*, *tt*, *tt̐h* and *ḍḍh*. In other varieties of Devanāgarī also such confusions exist. A few examples will make this clear. Mahāvīracarita :

sth : cch—I 1^a *svasthāya* > *svacchāya* E.

o : ā—II 13³ mahādoṣo > mahādāṣo B_o.

y : p—I 4^c vākyanisyanda-⁰ > ⁰-nispaṇd-⁰ K, E. B₀ etc.

III 40^d kalpāpāya-^o > kalyāṇāya } Md, Mt, Mg.
n : p kalpāpāya-^o > kalyāṇāya }

Confusions generally occur when the manuscript which a scribe is copying is in an unfamiliar writing and contains letters or symbols resembling characters in the script to which he is accustomed but having a different value. Thus K_1 , which is a moderately trustworthy though modern and incorrect transcript of a

Śāradā exemplar of the Ādiparvan of the Mahābhārata, shows confusion arising from the deceptive similarity between certain letters of the Śāradā and Devanāgarī alphabets. The copyist frequently writes *ma* for *sa*; *u* for *ta*, and *ṣa* for *tha* (thus *uṣā* for *tathā*); *da* for *ṛ*; *śa* for *ma*, or for *ca*; medial *u* for subscript *va*; *vya* for *vṛ*; *tu* for *tra*, *tta* for *tra*; *śya* for *cya*; *śca* for *cca*; medial *u* for subscript *t*; *bha* for *ta*; *ṣta* for *ṣya*; etc. Any good work on Indian palaeography will give full details of the different characters prevailing in various classes of scripts, and from these a list may be prepared of characters within the same script which may be misunderstood for one another and within different scripts having such resemblances but divergent values.

(b) Omission of letters or syllables, and particularly the superscript vowel signs, one case of which has been dealt with above: °dāso < °doso. Mahābhārata 1.142.25^d vṛthaiva sa vinañkṣasi D₅: for vinañkṣyasi, cf. T₂G vinañṣyasi. This mistake may be due to faulty hearing. Instances of loss of syllables:

Rām. I 2^s: ye madviṣayavāsinah: D₆ omits ya and reads °viṣavāsinah; in A₅ ye is represented by e and struck off. I 5³: nānānaganivāsinah: D₆ omits na, probably due to the influence of the neighbouring letters; in this case it will have to be cited under Homoiographon below.

(c) Transposition of letters or syllables (Anagrammatism): Mahāvīracarita III 37^d jñānena cānyo > Mt, Md. jñāne ca nānyo (possibly through wrong division of text: jñāne-na-cānyo).

Rām. I. 23¹: kaṇapṛāvaraṇās caiva > D₆ kaṇṇṛ-°

(d) Addition of letters (from various causes): Mahāvīracarita I 2^a mahāpuruṣasaṁrambho > Bo °samārambho.

(e) Confusion of words: any words in the language may be confused provided their general similarity is sufficient to overcome their unlikeness in some particular.

(f) Loss of letters, syllables, words or lines through similarity of writing (Homoiographon). When the similar letters stand next to each other we have haplography:

Mbh. 1. 103.13^c K₇D_nD_{1.5} abhyasūyām for *abhyasūyayām

Homoiographon:

Mvc. II 7² lolaloaṇo > lolaṇo I₂; III 18⁶ pāṣaṇḍa kaṇḍira
> pākhaṇḍira Bo; 19³ °prasavapāṁsana > prasavāsana E.

(g) Repetitions, Dittography etc. Letters, groups of letters, words and lines are written twice (or oftener) instead of once.

Mbh. 1.57, 21 : hāsyarūpeṇa śaṁkaraḥ > K₁ hāmyahāmya-°
(which is corrupt for hāsyahāsyā-°), a clear case of dittography.

(h) Omissions of groups of letters, words and lines through simple negligence :

Mvc. II 9⁰ abhicaranti > acaranti E.

SEMIVOLUNTARY AND VOLUNTARY CORRUPTIONS.

(a) Phonetic confusions are likely to occur when the copyist transcribes his manuscript at some one else's dictation. Thus the passage cited under (b) in the former section, namely Mbh 1.142.25¹ D₃: *vināṁkṣasi* almost sounds like *vināṁkṣyasi*. But it is not absolutely necessary to consider them as errors of the ear, for scribes might interchange letters or combinations of letters which sounded alike, though to the eye there might be no resemblance.

(b) Transposition of parts of words or whole words.

Rām. I 9⁶ *idaṁ vacanam* abravīt > B₂ *vacanam* tv *idaṁ* abravīt. I 11⁶ *tasmin kāle saha tvayā* > A *tasmin kāle tvayā saha*.

Mvc. I 13¹ Maithilasya rājarṣeḥ > T₁T₂ Rājarṣe maithilasya; 14³ kilānyat > T₁ anyat kila; III Mt are re *anaḍvan puruṣādhamā* > Mg are re *puruṣādhamā anaḍvan*.

Mbh. 1.1.25¹ *dhāryate yad* dvijātibhiḥ D₁ *yad dhāryate* dvi° (metrically defective).

(c) Transposition of one or more lines. This kind of transposition may in reality be arrested loss. A copyist finds that he has accidentally omitted a line or a number of lines, and rather than disfigure his page or waste his material and time he writes the omitted portion in the margin or at the foot of the page, usually adding a sign to show where it should come. The succeeding copyist may easily overlook this sign and thus permanently misplace the passage.

Karpūramañjarī I : manuscript T transposes verses 2 and 4 ; similarly in NR verse 7 stands after verse 8.

(d) Grammatical or other assimilation to the Context.

Rām. I 12^s tvam *gatiḥ* hi mato mama > A₅ ... hi *matir* mama 16² vṛtaḥ śatasahasreṇa *vānarāṇām* tarasvinām > A₇ (K₉) °*sahasraiś* ca, influenced by plural *vānarāṇām*.

8*³ tataḥ Śaka-*Pulindāmsca* Kalingārīś caiva mārḡata > °*Kālindānś* ca in B₂ (K₉) through Pulinda in the first pāda.

Mbh. 1.96.8 āhūya dānam kanyānām guṇavadbhyaḥ smṛtam *budhaiḥ* > T₁ *guṇavadbhiḥ* through *budhaiḥ* connected with *smṛtam*.

(e) Wrong junctions and divisions of words, generally going back to a stage when texts were written without word division. We may consider here the passage previously cited : Mvc III 37^a jñānena cānyo > * jñāne na cānyo > Mt Md jñāne ca nānyo.

Similarly the famous Gītā verse ahaṁ vaiśvānaro bhūtvā is explained by the ignorant reciters even today as aham vai śvā naro bhūtvā.

Mbh. 1.96.47^d *abravīd-dhasatī* tadā for *ha satī*¹

3.69.25^d *gātram paramaśobhanam* for *param aśobhanam*

¹ The following explanation of the passage is due to Dr. V. S. SUKTHANKAR : the expression *hasatī* becomes merely a verse-filling word without any cogency. It implies coquetry at a very critical moment, quite inconsistent with the behaviour of that particular character (Ambā). But in *ha satī*, *satī* is a PREGNANT word. This marriage to the Kuru family was an improvement on her own choice. She was not even formally engaged to Śālva. And in order to improve her status she could have very easily thrown Śālva overboard. She had only chosen him in her mind (*manasā vṛtaḥ*). But being a *satī*, she would not go back on her choice (Cf. Sāvitrī also). And because she was a *satī* (a chaste girl), so Paraśurāma fought for her with Bhīṣma. That is also why she propitiated Śiva and obtained a boon from Him. As a *satī* she carried her hate of Bhīṣma to the next birth, and reincarnating as *Śikhandī* she killed Bhīṣma. Thus we see how PREGNANT is the word *satī* in this context. *Hasatī* puts the lid on it, and making her out to be a coquette, bungles the whole thing. We are prone to acquiesce in a sense which might satisfy us, but which would have perverted the ideology of the ancient ṛsis.

(f) Interchange of words or phrases or prepositions of kindred meaning or contrasted meaning or in other words Synonyms or Antonyms. Thus *adhi* and *abhi* or *ati* frequently interchange ; cf. Rām. I 16⁴ *adhigaccha diśam pūrvām* > A₂K₈ *abhi-gaccha*. A long list of synonyms metrically equivalent is given by SUKTHANKAR from the Mahābhārata in his *Prolegomena*, p. xxxvii ; similarly for phrases. Thus we have *nareśvara* : *narādhipa* : *narottama-naraṣabha* for the first type, and *nīś-vasantam yathā nāgam* in opposition to *śvasantam iva pañnagam* for the second type.

(g) Omissions or insertions of seemingly unimportant words. These comprise mostly monosyllabic particles, common adverbs and conjunctions :

Pañcatantra : T A 13 : athātra bhavan kiṃ kartukāmaḥ

SP 111 atha bhavān kiṃ vakṣyati

Hp 55.4 and Hm 14 5 atha bhavān kiṃ bravīti

(h) False Recollections. It may sometimes happen that something in a passage before a scribe may suggest to him something else and he will write down what is in his mind, rather than what is before his eyes.

Thus Mbh. 5.127.29^a reads *vaśyendriyam jītmātyam* for which K₁ D₁ T₁ G_{1.3.4} have *jītmānam* recollecting *vi-jītmā* of 22^c and *ajītmā* of 27^c.

(i) Incorporation of marginalia. These may be explanations or glosses, illustrative quotations or readers' comments. Thus

in the manuscript of Sandeśarāsaka (No. $\frac{181}{1881-82}$ of the Govt. Collection of Mss. at the Bhandarkar Institute), the text incorporates some definitions of the metres used within itself ; originally these passages must have been marginalia, later on incorporated within the main text by some subsequent copyist.

(j) Interpolation. This is a conscious tampering with the text by way of substitution or addition with the object of repairing the results of unconscious errors. There is always some motive for interpolation like some obvious corruption or lacuna in the text which the interpolator tries to amend, often

unskilfully. Interpolation (which means polishing, improvement) would include both additions and omissions, but these omissions are the harder to detect when they are designed. In general it is often difficult to tell whether a change was designed or not. From the experience gained in this direction by the Mahābhārata studies carried on at the Bhandarkar Institute, we may classify interpolations into the following categories :

1. Substitution would naturally cover certain inherent difficulties of the text.

(i) Manuscripts betray the surreptitious efforts of the scribes and redactors to eliminate hiatus : cf. *Prolegomena* XCIII.

(ii) Efforts made to correct hypermetric lines : 1.20
vinatām viṣaṇṇavadanām > v. 1. *viṣaṇṇarūpām vinatām, vinatām dīnavadanām viṣaṇṇavadanām kadrūḥ*.

(iii) Efforts made to avoid solecism : 5.86.16^d *vyathito vīmanābhavat* : S. *vīmanā vyathito' bhavat*.

(iv) Removal of archaism, and of difficult or unfamiliar words and phrases : 5.34.78^d N. *apācīnāni* : S. *apanītāni*.

(v) Improving upon difficult or peculiar construction or sense :

Mbh. 5.7.28^c N *kṛṣṇam cāphṛtam jñātvā yuddhān mene jītaṁ jayam* > S. *kṛṣṇam cāpi mahābāhum āmantrya bhārat-arṣabha*.

2. Additions which may be on any scale from the introduction of a sentence or a verse to the manufacture of a long passage or even a whole chapter or poem are to be found, but they cannot be ascribed to the copyists. The redactors of the manuscripts must have had access to an unlimited but parallel type of literature to draw from.

(i) Multiplication of items mentioned in a list, or a desire to complete the description in greater detail ; cf. SUKTHANKAR, *Proleg.* pp. xxxviii seq.

(ii) Anticipation or repetition of stories, motives or discourses.

(iii) Ethical, moral or sententious maxims on occasions most suited to them.

(iv) Doctrinal interpolations, as found for instance in the Rāmāyaṇa R₁ 5.27.20-32 confined to the school of Rāmānuja, the passage being an apotheosis of Rāma.

(v) Additions due to filling out of lacunae (real or imaginary) : Mbh. 1.482*.

(vi) Harmonising interpolations, attempting to bring the conflicting passages into harmony. Cf. Adhy. 139 of the Bombay Edition—(App. I, No. 80 of the Crit. Ed. of Mbh.)—containing the only reference to the alleged installation of Yudhiṣṭhira as heir apparent, and to the exoneration of Arjuna from the sin of fighting with his own guru.

(vii) Actor's interpolations, in plays adapted for stage acting ; these interpolations are held mainly to be responsible, for instance, for the several recensions of Kālidāsa's *Śākuntalam*.

It will thus become apparent that there are very often more causes than one at work in producing corruption and therefore it is not always possible to assign the exact operating cause in a particular instance. In such cases method requires that preference should be given to causes known to be the most widely operative, regarding the others as possibly or actually contributory.

It is also well recognised that corruption is apt to breed corruption, so that when the conditions, both extrinsic and intrinsic, are for any reason unfavourable to the preservation of the text in its purity, the result may be beyond the means of the textual critic, for so rapid is the textual deterioration that the original readings become clouded over or driven out by fresh crops of corruptions.

CHAPTER VI

EMENDATION

A knowledge of the different types of errors and the mischiefs which affect a text in transmission, such as those listed in the last chapter, necessarily precedes all judgment upon its condition and contents. Recension enables the editor to arrive at the most ancient form of the transmitted text and his work will be that of an honest man but of a textual antiquarian, not a textual critic, since the restoration of the text, as far as possible, to its original form still remains, if by original form we understand the form intended by the author.

So the first question that he has to ask himself is : 'Is this what the ancient author is likely to have written here?' In judging this question we have to take into account the general characteristics of his diction and of his thought and the particular context. On the negative side we can say, with tolerable certainty, that such and such a reading is impossible ; on the positive side, however, such a test may not always be decisive. The appeal is to our own conception of the author's style and mind and of the context. Different conclusions may be reached in such cases by equally competent judges. How are we to estimate the degree of probability for each of these suggestions and how are we to decide between the rival suggestions ?

The editor must therefore consider the intrinsic character of the readings that he has arrived at by the process of recension. If the transmitted reading (that upon which the manuscripts are agreed) or the 'traditional' reading (that which both manuscripts and direct *testimonia* support) is completely destitute of sense, or if it involves some flagrant contradiction in the passage, or in its immediate neighbourhood, or some noticeable and inexplicable deviation of forms, constructions, or usages of words characteristic of the author, or some purposeless and tautological repetition, some violation of the laws of metre and rhythm as

observed by the author, or some apparent and unaccountable break in the context, or some inexcusable disorder in the thought sequence : then we are entitled to say that it is corrupt, however strong the external evidence may be in its favour. If such a corruption cannot be removed, then we dismiss it as hopelessly corrupt. But in a large number of cases we can discern a remedy or remedies, and when such is the case we can hit upon a correction which satisfies, in all respects, the demands of sense, context, grammar, style, metre and rhythm as characterising the author, we describe this correction as 'intrinsically probable'. The 'intrinsic probability' of a reading is relative simply to the original author of the text and has nothing to do with the transcriber of the manuscript.

If, in addition, the reading proposed is such as is likely to have been corrupted through ascertained channels of deterioration (such as those mentioned in the last chapter) to the 'traditional' or 'transmitted' reading with the variants of the reading, we shall claim for our suggestion or conjecture that it has the support of both intrinsic and 'extrinsic' probability.

The conjecture or proposal so made must possess 'transcriptional' probability (also referred to as 'documental' or 'documentary' probability), that is to say, it must explain how the copyist came to err, and in order to do this it must be palaeographically possible. In other words, if we find that certain transmitted readings can be probably explained as mere 'literal' corruptions of other readings which are believed, upon other grounds, to have stood in the archetype, then these latter are said to be 'transcriptionally probable.'

Just as the intrinsic probability of a reading is relative simply to the original author and has nothing to do with the transcriber of the manuscript, so also the documental probability of a reading is relative simply to the transcriber of the manuscript and has nothing to do with the original author. In other words, when there are three readings, say *ūdhah*, *ṛddhah* and *ūrdhvah*,¹ which

¹ At Mbh. 1.57.7. these, along with other variants such *rūpam*, *ramyah*, *śreṣṭhah*, *uccaiḥ* have been cited as examples of variation due

of these readings is best fitted to account for the other two? This question, it will be seen, has nothing to do with the intrinsic fitness of the three readings themselves, that is their comparative merit. It is concerned solely with their transmission by copyists. On the hypothesis that *ūḍhaḥ* is the original reading, can we suggest how it came to be corrupted to *ṛddhaḥ* and *ūrdhvaḥ*? This is what has been called the test of 'transcriptional probability'.

Let us now assume that the editor has done his work on the recension carefully and honestly, applying all the tests which have been evolved after continuous labours of generations of textual critics. After every such critical examination four conclusions are possible : acceptance, doubt, rejection or alteration (in other words emendation). That is to say, the critic may deliberately pronounce that what stands in the transmitted text represents what the author wrote or might well have written ; that it is doubtful whether it does ; that it certainly does not ; or, in the last event, that it may be replaced with certainty by something that does. In the first three cases, namely acceptance, doubt or rejection his judgment will be governed by considerations of intrinsic probabilities alone ; but in the last case it must regard transcriptional probability as well.

When the only reading or each of the several readings which our documents supply is seen to be impossible, then the remaining resource for recovering the text of the author is conjectural emendation. The emendations so suggested must have both intrinsic and documentary (or transcriptional) probabilities. In the case of doubtful readings of the manuscripts also we apply these tests. But there is this difference between a conjectural emendation and the variants in manuscripts so far as the method of application of these tests is concerned. We accept the variant which best satisfies the tests ; but we require that the conjectural emendation shall satisfy them absolutely well. The conjecture

to the *lectio difficilior* cf. *Prolegomena* XCII. Even in the elimination of this *lectio difficilior* transcriptional probability seems to be implied by such variants as stand nearest to it either in form or in sound.

does not rise from probability to certainty or approximate certainty, unless its fitness is exact and perfect.

If both probabilities—intrinsic as well as transcriptional—cannot be satisfied at one and the same time with regard to any emendation proposed, there is this difference of value between them. An emendation that violates documentary probability while it satisfies intrinsic probability may possibly be true, though we have no right to presume its truth ; an emendation on the other hand which satisfies documentary probability and yet violates intrinsic probability is wholly valueless. Hence the dictum that the *good critic must be something more than a mere palaeographer*.²

A proper estimate of intrinsic probabilities calls for far more knowledge, judgment and insight than are needed in the case of documentary or extrinsic probability. Thus conjectural emendation is at once the highest and the most difficult part of the textual critic's task.

There are some cases which cannot be reached even by such conjectural emendation ; for instance, if the faulty reading has been in possession of the text in the period anterior to our archetype, dating from a period very near to the autograph, it may not be possible to have recourse to transcriptional probability in the ordinary sense ; for it will require knowledge of the exact period of the autograph and of the archetype to arrive at the transcriptional probability of the reading which is already in possession of the transmitted text. Emendation in this case will be little more than a fortunate guess. 'Divination' of this kind may occasionally prove to be right through the discovery of fresh evidence.

Thus there are dangers to the employment of the method of emendation to arrive at the author's text which have to be faced and overcome wherever possible. Even when both sets of probabilities are satisfied, the reading remains highly probable unless the conditions are satisfied absolutely well. And this may not always be the case.

² HALL, p. 153.

For instance, in critically editing the *Mahābhārata*, emendation has played a very inconspicuous rôle. Interpretation has, in general, been given preference over emendation. Even in the case of corrupt passages, says SUKTHANKAR³, the reading of some manuscript or other gives sense, though it may not be the original sense, not even a wholly satisfactory sense. Precipitate emendation is, however, to be deprecated ; for experience has shown that but a small proportion of scholars' corrections are really amendments. Moreover, in this special case, we know, as yet, too little about the epic idiom and the epic world altogether ; as also about the vicissitudes of the epic text. Besides, who can say that the original was linguistically uniform, and conformed to any particular norm ?

What SUKTHANKAR says above holds equally for other kinds of texts which are not those of a single author. Emendation is to be resorted to, under favourable circumstances, only when all other tests of scientific interpretation fail. It is to be resorted to merely for the purpose of unifying divergent and conflicting manuscript evidence, never in opposition to the clear and unanimous testimony of manuscripts. The emendations are thus not the amendments of the text in the ordinary sense of the word, made in order to eke out a better sense when the manuscripts yield no sense or an unsatisfactory sense ; they are rather an effort to find, so to say, a hypothetical focus towards which the discordant readings converge. Following these principles SUKTHANKAR made altogether 36 emendations in the huge *Ādiparvan*, (comprising between 7000 & 8000 stanzas), being concerned mostly with single isolated words ; the correctness of these principles have been remarkably proved by the discovery in Nepal of the oldest surviving manuscript of this parvan, confirming actually fifty per cent. of these emendations.

But what has been said above need not apply wholly to texts of individual authors. Here the circumstances are somewhat different. We can study the style, diction, thought and even the idiosyncracies of our author by means of the evidence contained

³ *Prolegomena*, p. XCII.

within uncorrupted passages which must be still in possession of the text preserved in extant manuscripts. Such ancient parallels are worth many times as much as their modern correspondents. By skilfully utilizing them we may be in a position to emend the text satisfactorily where it has become corrupt in its transmission, provided the two probabilities mentioned in this chapter are satisfied. But in the absence of such ancient parallels, when we have to make a choice even between two variants, the test of intrinsic fitness will lead us to prefer the reading which best corresponds with *our* view of the author's intention. And it may happen that we see only a part of his intention. The reading which we reject may have been preferred by him because it expressed some element of thought or feeling which we have failed to seize. If this be so with reference to variants, we are likely to err still further if we try to emend the text with insufficient insight into the author's moods and modes of expression. Thus as far as possible we should try to avoid subjective judgment when the question of an emendation arises, and look for ancient parallels within the text itself in its uncorrupted passages.

There are two views among textual critics today between which we should steer, if we wish to do our work in the most satisfactory manner. One is that of the so-called 'conservative' school who try to thrust emendation from its proper sphere, namely the removal of the absolutely vicious, from the text, by the methods of what is called sometimes 'Scientific Interpretation.' This is particularly the case with western scholarship. The method is two-fold. First, the forcible extraction from the text of a meaning, which is not in the words, and which would not be in them, were it not seen to be required by the context. This is facilitated by the use made of translation, which is a necessary instrument for expressing the thought of one language in terms of the other. But this method of representation is a very imperfect one ; we may easily impose on ourselves and others by strained and ambiguous renderings, examples of which are numerous in the case of Vedic Exegesis. There is also a more subtle danger to which we are especially liable in dealing with dead languages, namely acquiescing in a sense which satisfies us but which would

not have satisfied the ancient writer. Above all we must avoid applying our own standards of taste, style and morality to the judgement of the text before us. The second method is that of ascribing to the 'idiosyncrasy' of the author abnormalities and eccentricities, which, if there were discrepancy in the tradition, would be certainly attributed to its faultiness. That there are lapses even in the best of writers cannot be denied, but that should not be made the occasion to retain systematically what is faulty in the transmitted text, on the ground that it may conceivably be genuine ; for the retention of such faults will do more harm to the text than their systematic rejection.

It is a weakness of the conservative critics⁴ to extol interpretation or exegesis at the expense of emendation. Some even go to the length of saying that the successful defence of a passage in a text is a greater service than its successful correction, but this is not true. Both try to do the same thing : what was previously dark being now made clear. The fault of the opposite school, on the other hand, is to disparage interpretation and to regard correction as the proper field of a scholar. A good example of this was the late Keshavlal Harshadrai DHURVA of Ahmedabad. The bias is reflected in the dictum that 'correction should precede interpretation.' But this is no more than a half-truth. Emendation must inevitably fail unless it expresses the meaning which the proper interpretation of the passage has shown to be required. The conservative critic's chief concern is for the safety of the traditional and by preference the transmitted text. He urges very rightly that if alteration is carried beyond a certain point it cuts away its own foundation, and so all certainty is destroyed. His objective is the minimum of change.

Many people appear to suppose that decisions upon doubtful points can be avoided by the expedient of leaving the traditional reading in possession of the text. This rule is a simple one and easy to apply. But owing to the constitution of the human mind it has consequences which they have possibly not contemplated.

⁴ The maxim is *sthitasya gatiś cīṇṭaniyā*.

If a corruption is left in a text when something might be substituted which would, at least, as a 'stop-gap,' give the sort of sense required, it will either blot out the sense of the passage or obtain the required sense by distorting the meaning of the other constituents of the context.

By the other method the editor will provide all necessary information about the evidence for the text in the notes of his 'critical apparatus'; but in the text itself he will give whatever in each case is supported by the balance of probabilities. Each and every case he will decide on its own merits without reference to decisions upon other cases not now before him. Thus, for instance, in Mhb 1.92.2 SUKTHANKAR has adopted the reading *Gaṅgā śrīr iva rūpiṇī* of Ś,K₁ against the reading '*strīrūpadhāriṇī*', of all the N manuscripts, while he has rejected the reading of these same two manuscripts in *e* : *śayanāt* has been rejected in favour of *salilāt* of all the other manuscripts. The critic may well ask, as WINTERITZ did⁵, 'Why should Ś,K₁ be of greater authority in the first line than in the second?' The reply is because the configuration of the manuscripts as well as the intrinsic merit of the readings are different in the two lines.⁶ Although the present illustration is not one of emendation, it forcibly brings to our notice that even in critical recension this doctrine is of fundamental applicability, and it is more so when the editor attempts to emend his text. Special considerations will be paid to 'doubtful' readings, which will be distinguished in his work as 'doubtfully accepted' or 'doubtfully rejected'. Legitimate doubt arises when the evidence *pro et contra* of documental and intrinsic probability is equal, or when documental probability points strongly to one side and intrinsic probability to another. Illegitimate doubt is the uncertainty of the doubter as to whether he has examined the whole of the evidence. Such a doubt is much more frequently felt than acknowledged and its effect upon critical work is highly injurious. On the one hand it is apt to take refuge in an uncritical acceptance of the traditional readings, and

⁵ *Annals BORI*. 15.167.

⁶ *Ibid.*, 16. 102-103.

on the other hand produce a crop of hesitant and mutually destructive conjectures.

By attempting a mean between these two extreme ways of critical scholarship, we shall produce what may be called the 'conservative text' which is neither an antiquarian's text nor a critic's text, but a compromise between the two. When it is consciously obtained it is arrived at by handicapping, more or less heavily, intrinsic probability as compared with documental probability, or by raising a minimum of probability which shall qualify a reading for admission into the text until it is in agreement with the notions of the editor. Both these procedures are arbitrary in their principle and likely to be erratic in their application.

The best procedure therefore is to apply scientific interpretation to the transmitted text on the basis of the variants available from the documents, and in case of absolutely vicious readings, apply scrupulously the two tests of documental and intrinsic probabilities to discover a focus towards which the discordant variants converge, which may then be adopted in the text as a conjectural emendation. In case an ancient parallel is available, we shall be perfectly certain of our conjecture; but where it does not exist, we can be tolerably certain of our conjecture.

CHAPTER VII

SOME CANONS OF TEXTUAL CRITICISM

It will now become apparent from the preceding chapters that Textual Criticism is in effect an art by means of which the critic skilfully and methodically applies common sense to a class of problems which beset all inquirers whose evidence rests upon the authority of manuscript documents and therefore ultimately limited by the human agency responsible for their transmission. Hence the general rules, founded mainly on observed forms of error or of license, and called 'canons of criticism', should be used with due recognition of their limited validity.

One of the most commonly recognized maxims is 'Prefer the harder reading' or what is technically called *lectio difficilior*. This dictum is valid in most cases—though not necessarily in all—where a transcriber has deliberately altered the reading which he found in his exemplar, since a frequent motive for such change was a desire to make the sense clearer. Accident apart, such deliberate changes will generally be intelligible. But this doctrine is not valid in a case of accidental error, since the result may be a reading which, if intelligible at all, will be 'harder' than the true one. It is seen, for example in the Mahābhārata transmission, that a large number of divergences which cannot ordinarily be explained by the general methods of textual reconstruction, are due to this *lectio difficilior* which may be in the nature of an archaism, or a solecism or a peculiar construction no longer valid for the period of transmission and the desire to eliminate them being the cause of the observed variation.

So far as the genealogical relationship between manuscripts is concerned there is this general rule: 'In a comparison of variants, the larger arrays of manuscripts represent the earlier divergences; the smaller always represent the later.' This may be seen from a numerical example. If twenty manuscripts array themselves into two groups of nine and eleven each with reference

to the variants, we can say that the common ancestor of the nine had one reading and the common ancestor of the eleven the other. The variation would take us back to the point at which the two lines of transmission diverged. Again, of these nine manuscripts arrayed on one side, at a different place, there may be four showing one reading and five another, both diverging from those of the eleven ; this fact indicates that lower down in the transmission the immediate ancestors of the four and five manuscripts respectively diverged from the common ancestor of the nine. In this manner the dictum helps us to locate the larger and smaller arrays for the purpose of building up the pedigree of the manuscripts utilized for the critical recension of the text, when the different lines of transmission are or have remained independent of each other.

In the last chapter we have referred to the two schools of criticism, the conservative giving undue prominence to scientific interpretation and the other school equally giving prominence to conjectural emendation. In the case of doubtful readings going back to the critical recension of the text the need of making a text compels some sort of decision in every instance. The 'doubtful' readings of the tradition will sometimes be doubtfully accepted and sometimes doubtfully rejected on the evidence available, and will appear with the accepteds in the text. But with regard to the emendations that are less than certain, the attitude of the conservative critic is clearly if somewhat crudely expressed in the dictum : 'It is better to leave in the text what, if not the original reading, is at least the remains of it.' The dictum appears to be based on the conception that such a doubtful reading has a better claim to originality than the conjectural emendation suggested by the opposite school.

In opposition to the above dictum the thesis of the other school of critics is : 'Stop-gaps should be preferred to debris'. In other words, when the constituted reading of the critical recension is doubtful, it would be better to present in the text something which the author might have written than something which he could not. We have already seen for instance, in the Mahābhārata, that when both intrinsic and extrinsic or documental

probabilities are equally balanced with reference to variants presented by the Northern and Southern Recensions, SUKTHANKAR has preferred the readings of N, on account of its greater purity and freedom from later accretions, as a stop-gap. Here the situation is with reference to the selection of two possible variants which have equal claim for inclusion or admission into the critical text. If such a selection is not based on any defined principle such as the one adopted by SUKTHANKAR, the result would be an eclectic text based on no defined principles, and actually a debris of all kinds of readings. With reference to emendation the dictum is even more forcible, for the doubtful traditional reading can perhaps be successfully emended, fully satisfying documental and intrinsic probabilities, and even when the conjecture is highly probable, it is something which the author could have written rather than could not, judging from intrinsic probability alone. In such cases the emendation, even if only a stop-gap, should be preferred to the faulty traditional reading, even when both probabilities are not equally balanced on its side.

One of the most vexed questions of textual criticism is the question to what extent the admitted imperfections and inconsistencies of a text may properly be left in it as due to the default of an author rather than of a scribe. No universal rule seems to be attainable here ; each case must be considered on its own merits, and the critic's procedure must necessarily be eclectic, an epithet often used, according to POSTGATE, with a tinge of reproach the ground for which is not easy to discover. If the autograph is not available there is no means of distinguishing between involuntary errors of a scribe and the involuntary errors or 'slips of the pen' of the author, for these are in fact only a scribe's mistakes, the author being his own amanuensis. If we are lucky enough to find ancient parallels within his text at places where such inconsistencies or imperfections are not admitted, the question can be solved to some extent. This reservation is due to the fact that what is recognized by us as clearly erroneous or faulty may as clearly be intended by the author and *not* to be removed by the critic. Much depends upon the precision with which the error can be corrected, but whenever there are more

plausible ways than one of doing this, the general dictum is that the faulty reading must be allowed to remain.

When the transmission of texts proceeds along more than one line of descent from the archetype, the divergence of the tradition will give us sometimes the original reading and sometimes an unoriginal reading. The concordant reading will necessarily be the original reading, but of the divergent readings found in the different strands of the tradition in their first cleavage, one of them will be the original, and the other non-original, and these are distributed in any degree among the different lines of descent. Each of these strands of tradition, lower down in the course of transmission, may again split into several strands. The argument which we have applied to the first cleavage applies to the second also ; but the term 'original' will be restricted now to the readings of the first line of descent. Reverting to the discussion of the whole history of transmission, we may now say that the cleavage lower down in the transmission, as represented in the different codices pertaining to this line of descent, will give us some portion of the transmitted text which is 'original' ; some portion which is 'unoriginal' so far as the archetype is concerned, but 'original' as far as the sub-archetype goes ; and the remaining 'unoriginal' with reference both to the archetype and the sub-archetype. What is 'original' to the sub-archetype but 'unoriginal' to the archetype, may be called the secondary characteristic of the codices belonging to this line of descent. The relationship between the different versions in this descent so far as such 'unoriginal' agreement is concerned may be termed *secondary*.

There are two ways of looking at this secondary interrelationship. The first we have defined above. The second may be defined as follows : when two versions are descended, in whole or in part, from a common parent later than the archetype, and therefore secondary to it in comparison, then they are secondarily interrelated.

The distinction which is thus made between original and secondary relationship of versions is merely a corollary of the

principle of genealogical relationship of manuscripts. It is useful in restoring the text of the archetype or the 'transmitted text', for when there are such secondary interrelationships between the different versions, whether the versions are pure or conflated, a knowledge of such secondary relationship will enable us to determine whether the agreement between the different versions is 'original' or 'secondary.'

The determination of such secondary relationship is based generally on the following two proofs : (1) Proof that the versions in question agree in showing a not inconsiderable number of important and striking features which cannot be reasonably supposed to have belonged to the archetype, nor to have been added or deleted independently in the same place in the several versions where they occur. The longer the addition or omission, the more certain we can be of the relationship between the versions. For it is much harder to suppose that two redactors should have added or omitted (except as a halography) the same passage, by mere chance and independently of each other, to or from the same place in the text. (2) Proof also is required that they belong to one line of descent in the shape of constant and far-reaching agreements in minor verbal details which must be so regular as to be over-whelming in their force. The strength of both the above presumptions is greatest with larger sections of the text, less with brief phrases and least with single words. The presumptions are strengthened by lack of any positive agreement among the remaining, discordant versions.

Secondary interrelationship is to be distinguished from conflation. The first represents a uniform descent from some sub-archetype for the whole or part of the text for which such relationship holds good, while the second represents indiscriminate mixing of the different strands of these independent traditions. In such intermixing even secondary characteristics, that is to say, such as are 'unoriginal' with respect to the 'transmitted text', may be included, so that when there is conflation between manuscripts belonging to two *independent* lines of transmission, such secondary features may be included in the conflation. It is therefore essential to make every attempt to eliminate secondary agreements.

whether in pure or mixed traditions, and leave only the 'original' agreements in possession of the critical recension.

When dealing with the versions of a text we generally find variation in the extent of completely preserved versions, one of them being the smallest and the other the largest, with a few intermediate versions thrown in between these two extremes. The briefer version is more generally termed the '*textus simplicior*' and the fuller version the '*textus ornatior*'. One of the generally accepted rules of textual criticism is that the fuller versions must be assumed *a priori* to be later and the briefer ones earlier. But like other *dicta* of textual criticism too much importance should not be given to this. One may come dangerously near to operating with it as a hard-and-fast axiom. For ordinarily there is no version which does not contain both omissions and insertions, be they deliberate or accidental. Some may tend more or less strongly in one direction, some in the other, but none will be consistent. Still the *dictum* has its value, and helps us in localizing either the omission or the insertion on the basis of these two types of versions, the *textus simplicior* and the *textus ornatior*. Thus the Ś₁K version of the Mahābhārata gives the *textus simplicior*, and though itself not free from certain insertions which are clearly interpolations, to be so judged on manuscript evidence, still helps us in constituting the text of the archetype to a greater extent than the other versions. Similarly the Southern Recension gives us the *textus ornatior*, and yet, though abounding in large accretions, it has a great importance for the constitution of the critical text, when the Northern Recension is in doubt.

CHAPTER VIII

PRACTICAL HINTS ON THE EDITING OF TEXTS

We have seen in general how a text has to be edited critically on the basis of the evidence taken from the extant manuscripts of the text and the *testimonia* appertaining thereto, and also how the critical recension has to be arrived at. As soon as all the extant manuscripts of the text have been located, it is the duty of the editor to secure them, and, if that is not possible, to secure rotographs or microfilm and photo-copies of the manuscripts for the editorial work. In the case of manual transcripts the editor should personally compare, if possible, the transcript with the original and rectify in it any scribal or other errors due to the personality of the transcriber. For we have already seen how this personality of the scribe intrudes upon us at every step and how we have to get behind him in order to arrive at his 'copy.' From such material his collation will commence, leading step by step to a deep study of the manuscripts, the determination of their peculiarities and genealogical relationship and judgment on their relative trustworthiness, the constitution of the critical recension and the restoring of the text to its original form wherever possible. In the present chapter some practical hints will be given regarding the things which are essential in a critical edition.

The Introduction must begin with a description of the critical apparatus which has been utilized by the editor for his work. First then comes a general account of the manuscripts, dealing with the number of extant manuscripts as far as they are known, the number of manuscripts actually examined for the critical recension and the number fully or partially collated, and the reasons for selecting the manuscripts so collated. All independent available Mss. should be used except such as are derived from extant Mss.

The choice of the critical apparatus will depend upon several considerations, such as the scripts in which the manuscripts are

transcribed, or the places from which they hail originally, the relative age of the manuscripts, or discrepant types within a version in preference to similar types. All these reasons which affect the choice of the critical apparatus should be stated clearly and briefly in this general account.

Then the editor should briefly indicate the classification of the manuscripts into recensions and versions as determined by his collations, and according to this classification he should then give a list of the manuscripts forming the critical apparatus. The list will begin, under each recension and version, with a *siglum* or abbreviated sign for the manuscript by which the editor denotes its readings in his *apparatus criticus*, and details of the place of deposit, name of the library and identification number which it bears in the catalogue of that library, and its date if it bears one.

While assigning the *siglum* to a manuscript the editor should avoid using any arbitrary signs. The *siglum* should have some character reminding us of the manuscript for which it stands in the critical apparatus ; this may have reference to the place from which it hails ; or in such cases where a text has been preserved in more than one script, the name of the script may indicate the manuscript. When there are more manuscripts than one in a given script or hailing from the same place, numerals placed below the abbreviation (sublinear or infralinear or inferior) may indicate them severally. Thus G_1 G_2 G_3 G_r will indicate r manuscripts written in the Grantha character if the symbol has reference to the script, or r manuscripts hailing from Gwalior if the reference is to the place of deposit. The combination of the alphabetical symbol and numerals can be made scientific by assigning to the numerals in their ascending order an increasing degree of impurity in the manuscripts represented by them ; thus G_1 will be superior to G_2 , and this again to G_3 , and so on.

Now begins a detailed account of the manuscripts in the order indicated in the list given above. This account will give the *siglum*, followed by the place of deposit, name of the library, the press-mark of the library, the number of folios, the number of lines in each folio and the number of letters in each line, the material on which it is written and the style of its handwriting.

This external description also takes account of the orthographical peculiarities of the manuscript, the nature and condition of the manuscript, existence of marginalia and interlinear corrections, idiosyncracies in the numbering of the folios, the number of sections, lacunae (if any), etc. The beginning and end of the text should also be given, and some intermediate colophons whenever they give us some information about the history of its transmission. Incidentally the name of the patron at whose instance the manuscript may have been transcribed, the name of the scribe, the place of transcription and the date of transcription or of the 'copy' so transcribed, should find a place in this description whenever circumstances permit the editor to gain this information. If the manuscript bears a title or titles, this should also be indicated in the detailed account. While dealing with the style of writing the editor should indicate whether the manuscript is in one uniform handwriting or whether several 'hands' are seen to be at work on it. Similarly with regard to the additions or corrections entered in the margin or between the lines. We have already seen that corrections entered in the first hand are of different (and of much greater) value than those entered by a second hand. All such information as will help the reader to picture to himself the condition and value of the manuscript for critical purposes should be recorded here.

In the case of manuscripts which have been eliminated the reasons for such elimination must be stated. Similarly when manuscripts are partially collated, the editor should indicate the places where such collation begins and ends in the detailed account of each manuscript.

Another important feature which should form part of this detailed account is a judgment with reference to the trustworthiness of the manuscript.

Many manuscripts contain *prāśastis* written by the transcriber at the beginning of some section of the work. As they often contain some historical information, but are not relevant to the text itself, they should be indicated in the detailed account rather than in the critical apparatus.

When partial collations have been given there should be a

table showing the manuscripts collated for different portions of the text, so that the critical reader may have easy access to this information when studying the constituted text and the notes of the critical apparatus. Being tabular in form, reference is made easy and saves the reader a lot of unnecessary trouble.

After the manuscripts have been described in detail, the editor should give detailed information of the *testimonia* which are available, such as ancient commentaries, epitomes, adaptations and florilegia, and which have been utilized for the study of the text.

The relationship of the manuscripts as expressed in a genealogy should now be represented if possible in the form of a pedigree or *stemma codicum*. Some method should be adopted here to indicate lines of transmission between non-extant codices whose existence at some time can be assumed on the evidence presented by the extant manuscripts, so that these can be separated from the lines of transmission of definitely known manuscripts, extant or non-extant. The simplest way is to indicate the former by a series of dots and the latter by continuous straight lines.

The non-extant manuscripts or those which are no longer in existence but whose existence at some time in the past must be assumed in order to explain the relation in which the extant manuscripts stand to each other should be indicated either by Greek letters ($\alpha \beta \gamma \dots$) or by starred letters ($A^* B^* C^* a^* b^* c^*$). The latter method corresponds to the starred forms used in linguistics to explain the relationship between cognate vocables, and may therefore be adopted.

Where practicable the editor should indicate the probable or the exact recorded date of his manuscripts by numerals added at the top of the *sigla* used for indicating them, standing for the centuries of the Christian era. Thus M^{11} will indicate that the manuscript designated by the *siglum* M is dated somewhere within the eleventh century; similarly K^{13-14} will indicate that the period to which K belongs lies somewhere between the thirteenth and fourteenth centuries A.D. If the dates cannot be given exactly on definite evidence, but the lower limit can be ascertained by extrin-

sic evidence, this limit may be similarly indicated by an asterisk attached to the numeral (thus K^{XIII*}).

Immediately after the pedigree mentioned above, an explanation of the *sigla* used in the pedigree should be given, preceding a discussion surveying the recensions and their versions.

In such a critical survey the editor should indicate the main agreements and differences between the recensions and follow this up with a similar treatment of the versions belonging to each recension. If there is the received text which has been normalized, and which is generally called the 'vulgate', the editor should also indicate the main differences between the recensions and the vulgate. As the recensions differentiate from each other by the uniformity of their divergent readings and by discrepancies which are numerous and multifarious, these deviations should be classified and indicated in the introduction. For it is on such a basis that the recensions are postulated by the editor and the critical reader should have before him the findings of the editor, which should be well documented.

After dealing with the recensions, the editor's next task is to estimate the character and mutual relations of the various versions and their manuscripts. The indications here must be as detailed as possible to justify his classification of the manuscript material, the affinities and deviations between individual manuscripts of given versions being properly discussed with evidence drawn from the edition. Where sub-recensions exist between the recension and its splitting up into several versions, the sub-recension must be studied in equally great detail, and the results of the investigation placed before the reader. The editor should remember that he is giving a sampling of his far more detailed investigation and therefore take care in selecting his examples which should be both typical as well as important. Thus he should not only demonstrate the community of source between two manuscripts or two versions, but also establish on incontrovertible grounds that the one is not a mere copy of the other but is independent within that particular strand of the transmission. Similarly if conflated manuscripts exist in the different versions, instances of such conflation must be pointed out.

So far the editor has merely stated his judgment on the nature of the manuscripts material utilized by him and their relative trustworthiness with respect to the constitution of the text. He should now deal with the critical principles which he has followed in the constitution of the text with special reference to the material before him. So this part of his work is in no sense a text-book on textual criticism, but merely the application of the general principles with special reference to the case under consideration. If he deviates from the well-established classical principles of criticism, he should indicate the nature of his material which is responsible for such a departure. If there are difficulties in their application he should indicate them. Having evaluated the manuscripts utilized by him, he should state the manner in which he has constituted the text. If he has emended the 'transmitted text' so reached, he should indicate just those reasons which have led him to 'conjecture' the original reading. If there are interpolations of a lengthy nature the editor should discuss them in the introduction, indicating specifically his reasons for not including them within the text. Short interpolations need not be specially discussed.

✓ If there are other editions of the text besides his, the editor should discuss them, indicating their limitations, in the light of the material which he has himself utilized. He should, in other words, evaluate them impartially.

Whenever it is possible, the editor should then refer to the known history of the author and the text, the different works attributed to him and evaluation of the literary merits of the author, his peculiarities and idiosyncracies. As we have not dealt with the problem of higher criticism, we shall not indicate here the methods which may be employed to separate the sources which the author has utilized. But what may be done by the editor is to indicate the parallel versions existing at the proper place in the critical apparatus, and give their conspectus in the introduction. [The editor should particularly take pains to collect all references made by his author to known or unknown authorities found in the text, the names of authors as well as works, and any other information of historical importance such as dynastic

names, names of individual rulers, etc. which may be found scattered in the text. Citations by his author should be traced, as far as possible, and the result of such tracing indicated in the introduction. Similarly if his text has been commented upon, the editor should indicate the brief history of these commentators and evaluate their commentaries for an understanding of the text. The editor is also expected to deal with his text from the point of view of literature, and thus furnish a short but critical account and estimate of the author's contribution to the particular type of literature and his place within it, the influences which have moulded his thought and expression and his own influence on the subsequent age.

With respect to the text itself, many methods have been employed by different editors in printing such critical recensions. No definite rules can be laid down here to indicate the varying nature of the text as constituted, expressed in the four categories : accepted, doubtfully accepted, doubtfully rejected and rejected ; whatever system the editor adopts, he should clearly indicate it in his list of abbreviations and diacritical signs. The general practice has been to indicate conjectural emendation by an asterisk preceding the emendation conjectured. With regard to other matters the practice seems to fluctuate. Paul MAAS suggests the following symbols for definite types : conjectural additions are to be indicated by the signs < >, the matter added conjecturally being placed within them ; conjectural athetisation through double square brackets. [[]] ; completion of mechanical damages through square brackets and false localized corruptions through a dagger †. The difference between < > and the square brackets is important, the first indicating that already the establishing of the lacuna depends upon surmise and the second that an attested lacuna is filled out, intrinsically agreeing with the surrounding text ; it is also met with in such cases where the tradition expressly attests that there was a lacuna in its exemplar. EDGERTON in his romanized *Pañcatantra Reconstructed* employs italics for parts of the text which are not verbally certain, while he employs parentheses () to enclose parts which may not have been in the original, even in general sense. ŚUKTHANKAR employs a wavy line,

under the text when it is less than certain, and an asterisk * for a conjectural emendation.

Since the text has been constituted on the evidence of all the versions of each recension and in each case supported by the balance of probabilities, all important deviations in the manuscripts are to be noted in the critical apparatus, so that every critical reader may have, at his disposal, the entire material for controlling and correcting the constituted text, where necessary. It is like the verdict given by a judge, supported by all the evidence collected in the court, *pro et contra*; but just as there are different judges who may differently interpret the evidence recorded, so also there are critical readers, probably as qualified as the editor, but not having the opportunities of recording the evidence, who may either confirm or differ from the readings constituted by the editor. [As the critical edition is primarily addressed to such readers, it is the duty of the editor to record all the important deviations in the manuscripts in the critical notes appended to the text. Thus under the text are to be shown, in a series: (1) The sum total of the deviations from the archetype, as far as they are not already indicated in the text itself; (2) the rejected variants together with the scribe's mistakes, not so much to show that they do not come into consideration for the settling of the text but just to point out to the reader that at this place the text does not go back to the archetype, but only to a stratum lower down in the transmission; (3) the sub-variants, in case they do not agree with each other or with the major variants and (4) common readings of more variants bearers. Short interpolations of individual manuscripts or groups of manuscripts should also be inserted in the critical notes, the longer being reserved for an appendix. The appendix may also contain shorter interpolations or additional passages for which the evidence rests only on one manuscript or on a very small and insignificant group of Mss. The place of occurrence of such additional passages within the text should also be indicated in the footnotes of the critical apparatus.) Thus the *apparatus criticus* together with the appendix containing the larger additions and interpolations will give the entire manuscript material available for the constitution

of the text, and the editor's task so far as the critical recension is concerned is now completed. He has given all the relevant information about his material in the introduction and the principles employed in the constitution of the text ; 'and in the critical edition, besides the constituted text, indicating exactly the balance of probabilities in each individual case, he has an *apparatus criticus* where the entire manuscripts material is well digested and presented on definite principles. The critical reader will now have before him all the significant material on the basis of which he can either agree with the constituted text of the editor, or constitute it himself in the light of his experience and on the basis of the material here presented.

We now come to another aspect of critical editing which does not form part, strictly speaking, of textual criticism, but which is nevertheless essential for either lexical study or for stylistics. Among the appendices and indices which the editor may well supply there ought to be (1) an index of all the pādas of the verse part of his text, whether the text is found in the constituted part or in the critical apparatus or in the appendix containing the longer additions ; (2) an index verborum of all unusual words, if a complete index verborum is not practicable ; (3) an index of all the words found in the text and the critical apparatus, but reference being given to one or two occurrences only ; (4) all historical and geographical information contained within the text, including a complete index of proper names.

There should be a concordance of the various printed editions of the text already in existence so that references of this edition may easily be converted to those of another edition. All these are the necessary corollaries of critical editing of texts.

If there are parallel versions in other texts, the editor will have to consider them in a separate appendix, and correlate the evidence within them. The actual interpretation of these versions forms part of higher criticism, and is therefore left out of consideration in the present work.

We have dealt here with what may be called the 'lower criticism' of the text (German *Niedere Textkritik* or French *critique verbale*), limiting ourselves to Heuristics, Recensio and Emendatio.

The subject of higher criticism may perhaps be dealt with profitably in a separate work, as conditions in India so far are not favourable to its study in the absence of exact chronology on the one hand and intensive study of definite periods of literature on the other.

One last word may here be added on different methods of actually presenting the critical apparatus; some prefer to give this apparatus immediately on the same page, the constituted text appearing on the upper half of the page and the critical apparatus occupying the lower half; others give the apparatus at the end of the volume as 'variant readings.' Strict scholarship with regard to the critical apparatus is slightly different from merely giving variant readings. But in any case it helps the reader to have all the material utilized for the constitution of the text on the same page where the text is printed. And in a majority of critical editions this method has been uniformly adopted.

There is one case which we have not considered here. When the autograph of the author and its copy (whether immediate or intermediate) are not widely separated in point of time, and this copy happens to be the best manuscript surviving of the text, the best course would be to print it, with minimal change, correcting only the obvious and unavoidable clerical errors, and indicate the deviations of other important manuscripts in the critical apparatus. This course is only of limited validity and applies to works of authors who have lived within the last seven or eight hundred years; there is said to be in existence a copy of *Jñāneśvarī* made by the disciple of Saccidānanda Bābā, the original amanuensis of Jñānadeva, in the Śaka year 1272 (= 1350 A.D.)¹ within 60 years of the autograph itself. In the absence of other pre-Ekanāth manuscripts of this work, the only course open for a critical editor is to print the text of this codex, correcting only

¹ A microfilm of this Ms. is in the Deccan College Research Institute. The second figure in the date is rubbed off, but on the basis of its readings the Ms. appears to be, if not the actual original written in 1350 A.D., a direct copy of the original. The discovery of this Ms. and its microfilming are due to the enterprise of Dr. R. G. HARSHE, Registrar of the above Institute.

obvious clerical errors, and record in the critical notes the variants from all other dated manuscripts of the text along with the more important of the copies which are not dated but which appear old. If a still earlier copy of the text is actually discovered, and on comparison with this codex is found to be superior to it, our task will now be to adopt the text of the earlier codex and authenticate it with the help of the second codex, and record all the variants as before in the critical notes. In the case of authors who lived since 1200 A.D., the problem of textual criticism is not so great, and the method here adopted, may be followed provided the difference in point of time between our oldest and best manuscript and the autograph is not very great. Texts which have a religious flavour are often bound to undergo great changes in the course of transmission, and the method indicated here will not hold good for them. Thus the work of Līlāśuka Bilvamaṅgala exists in two recensions, and it is not possible to arrive at his text by authenticating the readings of the best surviving manuscripts for the simple reason that systematic conflation has been carried on through a considerable period. In such cases the regular process of Heuristics, Recensio and Emendatio have to be applied. In the case of some minor works there may not be more than two or three manuscripts in existence, and the problem of critical recension is very much simplified here. If there is only one recension noticeable, the best manuscript will be taken as the norm and its readings authenticated with the help of the remaining manuscripts. If there are two recensions, the genealogical method will give us the critical text.

The main difficulty of textual criticism will come when the editor deals with non-Vedic texts such as the Epics and the Purāṇas, for there will be a large number of versions and sub-recensions, wherein conflation has been carried on for ages together. The best model of such an edition is the Critical Edition of the Mahābhārata undertaken by the Bhandarkar Oriental Research Institute of Poona. No editor undertaking similar work on the Purāṇas or other equally difficult texts can afford to neglect the principles and methods employed and perfected by SUKTHANKAR in his critical edition of the Ādiparvan.

CHAPTER I

INTRODUCTION

Textual criticism has naturally to deal with texts. It may be defined as 'the skilled and methodical exercise of the human intellect on the settlement of *texts*. By a *text* we understand a document written in a language known, more or less, to the inquirer, and assumed to have a meaning which has been or can be ascertained.'¹ Such being the case, it will be appropriate, in order to clarify the nature of the problems confronting a textual critic, to begin with a sketch of the history of textual transmission in India up to the period when printing was introduced.

Since a text implies, according to the above definition, a *written* document, the knowledge of writing has to be presumed for the basis of our study. Until the discovery of the Harappa and Mohenjo Daro culture, the antiquity of writing did not seem to go back to a very early age in India, since the earliest written documents apparently did not reach back beyond the fourth century B.C. although literary evidence, especially that derived from Greek sources, pointed to the currency of writing at least a century earlier. So far no documents have been discovered either at Harappa or at Mohenjo Daro, but a large number of seals and sealings and pottery fragments are found to contain inscriptions in a script which has not so far been successfully and convincingly deciphered. The inscriptions are quite short. Copper tablets are also found with inscribed writing. Minute characters are engraved on certain bangles of vitrified clay.² On this evidence Sir John MARSHALL remarks : 'In the absence of other materials like clay tablets, we must infer that the Indus scribes, in the place of clay, employed less durable materials, such as birch-bark,

¹ POSTAGE in *Companion to Latin Studies*, p. 791.

² MARSHALL, *Mohenjo Daro*, I. 40.

palm-leaves, parchment, wood or cotton cloth, any of which would naturally have perished in the course of the ages.”³

In his interesting book on the *Indus Civilisation*, MACKAY remarks, following the lead of Sir John MARSHALL : ‘ The script appears very much the same on all the objects, irrespective of whether they were unearthed at high or low levels of the two cities. . . . A different or more cursive style of writing may, of course, have been used for ordinary occasions, though there is at present no evidence to prove this. The complete absence of any long documents suggests that the writing materials in general use were leather, wood, or even possibly leaves, all of which have long since perished in the damp and salty soil’⁴ . . . Certain thin pottery plaques, rectangular in shape with a perforated lug at one end, may have been intended for writing tablets. They are of small size, ranging from four to seven inches in length, and were doubtless once covered with a smooth substance from which the writing could be washed, after the fashion of the wooden tablets still used in India’⁵ . . . Pot-marks are not common at Mohenjo Daro, although more frequent at Harappa, and when found on the former site are scratched on the shoulder of large jars. In this case the marks take the form of characters on the seat-amulets, but, strangely enough, no potsherd is known with any long inscription upon it, unless very soluble ink was used that has vanished in the course of centuries.⁶ . . . one sherd has, however, come to light at Mohenjo Daro on one side of which is roughly scratched the picture of a boat, and on the reverse a couple of pictographic characters.’⁷ Further on he remarks : ‘ Only one specimen of a theriomorphic jar has come to light, and this is in the shape of a couchant ram with a deep hollow in the back, which may have served as an ink-well.’⁸ It is apparent from this discussion that although we have no exact knowledge of the Indus script or the possible writing materials used by the Indus scribes, the existence of writing during the period is beyond doubt.

³ *Ibid.*, 35.

⁴ *Indus Civilisation*, p. 13.

⁵ *Ibid.*, 139.

⁶ *Ibid.*, 155.

⁷ *Ibid.*, 155.

⁸ *Ibid.*, 157.

Another fact connected with Mohenjo Daro but strangely omitted from the official reports is the discovery of a piece of silver, bearing the number DK 1341 (N. S. 9), made by Rao Bahadur (then Mr.) K. N. DIKSHIT, on the 1st of January 1926, on both sides of which he noted the occurrence of cuneiform punches.⁹ This silver piece is the earliest known cuneiform inscription or writing found in India, and will form part of the work of a future palaeographer who will have to revise the now classical treatise of BÜHLER.¹⁰

Such being the case, how comes it that there is no specific mention of writing to be found in Indian literature following the Indus Valley civilisation? The problem in India is fraught with difficulties since even for the modern Hindu, the Vedas and Śāstras exist only 'in the mouth of the teacher,' whose word has more weight than a written text, and they can only be learnt from teachers, not from manuscripts (Mss.) or books. Even today the Hindus esteem only the *mukhasthā vidyā*, the learning which the Pandit has imprinted on his memory. As BÜHLER says 'even the modern poets do not wish to be read, but hope that their verses will become "ornaments for the throats of the learned" (*satām kaṇṭhabhūṣaṇam.*)' According to the same scholar, 'as far as our observation reaches, this state of things has always been the same since the earliest times,' but we cannot agree with him when he says that 'its ultimate cause probably is that the beginning of the Hindu Śāstras and poetry goes back to a time when writing was unknown, and that a system of oral teaching, already traceable in the R̥gveda, was fully developed before the introduction of written characters,'¹² since the existence of written characters before this period is now proved by the Mohenjo Daro and Harappa seals and amulets. But the period between the Indus Valley pictographic alphabet and the Mauryan characters of the Brāhmī or Kharoṣṭhī type is a dark one in Indian history although efforts are not lacking to connect these two. Professor

⁹ I am indebted to Prof. D. D. KOSAMBI for this information.

¹⁰ *Indische Palaeographie*, Strassburg, 1896.

¹¹ *Ibid.*, p. 4.

¹² *Ibid.*

LANGDON makes out a case for deriving the early Brāhmī alphabet from the Indus script, but until the gap is bridged by fresh discoveries, and until the dark period has been illuminated by the unravelling of the Indus script itself, such theories will remain in the field of speculation only.

Literary evidence for the use of writing is to be found in Brahmanical, Buddhist and Jain literatures, but as the chronology of these works is not determinable exactly, we have to consider the evidence found in foreign dated sources to be more important. 'To the last quarter of the fourth century B.C. refers the statement of Nearchos, according to which the Hindus wrote letters on well beaten cloth, and the note of Q. Curtius, which mentions the tender inner bark of trees as serving the same purpose, and clearly points out to the early utilisation of the well-known birch-bark.'¹³ These statements indicate the currency of writing in India on two different indigenous materials during B.C. 327-25. Similarly the results of palaeographic examination of the most ancient Indian inscriptions (other than those found at Mohenjo Daro or Harappa) fully agree with the literary evidence, which bears witness to the widely spread use of writing during the fifth century B.C. and perhaps even earlier, as we know it.

The study of the development of the written characters during the entire evolution of writing in India, from the Indus Valley civilisation to the Brāhmī and Kharoṣṭhī and to their later forms must form part of a separate treatise on Indian palaeography, and await the decipherment of the Indus script. For the later scripts BÜHLER's excellent monograph on the subject may still be consulted.

Among the writing materials used by the Hindus may be mentioned the following :

(a) Birch-bark or the inner bark of the Bhūrja tree which the Himalaya produces in great quantity, probably already alluded to by Curtius as a writing material used at the time of Alexander's invasion, and later named as such in Northern Buddhist and Brahmanical Sanskrit writing. The oldest documents yet dis-

¹³ *Ibid.*, p. 6.

covered, written on this material, are the Kharoṣṭhī Dhammapada from Khotan and the inscribed 'twists' tied up with threads which MASSON discovered in Stūpas in Afghanistan. Next come the fragments of the Godfrey Collections and the Bower Manuscript, the leaves of which have been cut according to the size of the palm-leaves, and like these, pierced in the middle in order to pass a string through to hold them together. Next in age is the Bakhshālī Manuscript, and then follow after a considerable interval the birch-bark Mss. from Kashmir in the libraries of Poona, Lahore, Calcutta, London, Oxford, Vienna and Berlin, none of which are probably earlier than the 15th century A.D.

(b) Cotton cloth, mentioned by Nearchos, is also referred to by some metrical Smṛtis and several inscriptions of the Sāta-vāhana period, as material on which official and private documents were written, and which is called *paṭa*, *paṭikā* or *kārpāsika paṭa*. According to BURNELL and RICE, Kanarese traders still use a kind of cloth called *kaḍalam*, which is covered with a paste of tamarind seed and afterwards blackened with charcoal. The letters are written with chalk or steatite pencil, and the writing is white or black.

BÜHLER found a silk band with the list of the Jain Sūtras, written in ink at Jesalmir, while PETERSON discovered a Ms. written on cloth dated Vikrama Saṁvat 1418 (A.D., 1351-52) at Anahilvad Patan. In the 'Ya-mên' ruin STEIN discovered a strip of white silk inscribed with Kharoṣṭhī, and at the ancient temples of Miran he found three large pieces of fine coloured silk with Kharoṣṭhī inscriptions. Another specimen was found by him at the 'Jade Gate', with similar characters, while at the Great Magazine of the Limes he found a narrow strip of silk bearing a long line in India Brāhmī character of a type associated with the rule of the Indo-Scythian or Kushana Emperors.

(c) Wooden boards are referred to in Vinayapiṭaka and the Jātakas. An inscription of the Western Kṣatrapa Nahapāna speaks of boards (*phalaka*) in the guild-hall, on which agreements regarding loans were recorded. Mss. on varnished boards are common in Burma and an Indian Ms. of this type, hailing from Assam, is in the possession of the Bodleian Library at Oxford.

(d) Palm-leaves as writing material are referred to by Hsüan-Chuang (7th cent. A.D.), but their use seems to go back to a much earlier period.

The Horiuzi palm-leaf Ms. certainly goes back to the sixth century, and some fragments in the Godfrey Collection from Kashgar have been assigned, on palaeographic evidence, to the fourth century, and are older than the Bower Ms. Since the *bhūrja-pattra* leaves of the Bower Ms. are cut according to the size of the palm-leaves, which is also the case with the Taxila Copper-Plate grant belonging to a period not later than the first century A.D., it follows that the palm-leaves must have been in use even at this early period in the Panjab, hundreds of miles away from the Deccan, which was the natural home of the palm-leaf. Their length varies between one and three feet and their breadth between one and a quarter to four inches.

The palm-leaf Mss. of India are made from the leaves of *Corypha umbraculifera* or *Borassus flabellifera*; the former is indigenous in India but the latter was probably introduced from Africa. The leaves of both these trees are long and tapering, with central ribs. By an exhaustive examination of the well-known palm-leaf Mss. HOERNLE came to the conclusion that all the earlier palm-leaf Mss. are made from the leaves of *Corypha*.

The numerous palm-leaf Mss. from the Horiuzi Ms. downwards prove that since ancient times they were written on with ink all over Northern, Eastern, Central and Western India; in the Dravidian districts and in Orissa, the letters were, and still are, incised with a stylus and afterwards blackened with soot or charcoal. All palm-leaf Mss. are pierced either with one hole, usually in the middle, more rarely, in specimens from Kashgar, on the left; or with two holes on the left and the right, through which strings (*sūtra* or *śarayantraka*) are passed in order to keep the leaves together.

(e) From a reference in Subandhu's *Vāsavadattā*¹⁴ it is inferred that skins were used for writing, but in view of its ritual impurity, this inference, so far as Hindu writings are concerned,

¹⁴ *Indische Palaeographie*, p. 78.

is a little hazardous. In the European collections pieces of leather from Kashgar inscribed with Indian characters are said to exist. During his epoch-making expedition in Chinese Turkistan STEIN (now Sir Aurel) discovered at Niya about two dozen Kharoṣṭhī documents on leather mostly dated and apparently official, the material used for writing being little suspected among a Buddhist population with an Indian civilisation. In this connection Vincent SMITH, (in his short note contributed to *JRAS* 1902, 232 ff.) refers to Strabo (xv, 72, 73 translated by McCRINDLE, *Ancient India as described by Strabo*, p. 71) who has preserved a notice of an Indian official document on parchment sent to Augustus Ceaser who died in A.D. 14. Thus the use of leather or parchment does not altogether seem to be outside the scope of early Indian scribes in spite of the ritual impurity attached to it.

(f) Metals are not only referred to in Indian literature, but many of the important grants are found to be inscribed on metal plates. Gold and silver plates have been utilized for writing and specimens of votive inscriptions have been discovered in the Stūpas at Gāngu near Taxila and at Bhaṭṭiprolu. More numerous than these are the copper-plates (*tāmraṇaṭa*, *tāmrapattra*, *tāmraśāsana* or simply *tāmra*) used for various kinds of documents intended to last, and especially land-grants. Fa-hian (about 400 A.D.) refers to copper-plate grants handed down from Buddha's time; the Soghaura plate tells us that during the Maurya period official decrees were committed to copper. This plate has been cast in a mould of sand, into which the letters and the emblems above them had been previously scratched with a stylus or a pointed piece of wood. Hence both the letters and the emblems appear on the plate in relievō. All other copper-plates have been fashioned with the hammer, and many among them show distinct traces of the blows. Their thickness and size vary considerably, some being on very thin sheets which could be bent double and weighing only a few ounces, while others are exceedingly massive and are eight or nine pounds in weight or even heavier. Their size is partly determined by the nature of the writing material commonly used in the districts where they were issued originally, and partly by the extent of the document to be engraved, the size of the clerk's writing and

so forth. The smiths always imitated the originals given them, and consequently if these were on palm-leaves, the plates were made narrow and long ; and if they were on birch-bark, the plates became much broader, often almost square. The narrow plates are characteristic of Southern India and the broader ones of places further north. If more than one plate was required, the several plates were usually connected by copper rings passed through round holes in the plates. The single ring is found in the south. Various copper statues show votive inscriptions on their bases.

(g) Stones of the most various kinds, round and artificially smoothed blocks of basalt or trap, as well as artistically carved columns of sandstone, or even prisms of crystal, have been used for making documents since the most ancient times ; such writings vary from official and private documents to even poetical effusions. Large fragments of plays by the Cāhamāna king, Vighraha IV, and by his poet-laureate Somadeva, have been found at Ajmer, and a large Jaina *Sthalapurāṇa* in a number of sargas exists at Bijholli.

(h) Bricks on which Buddhist Sūtras are inscribed have been found in the North-Western Provinces. The characters were apparently scratched on the moist clay before it was baked.

(i) Paper Mss. are generally not older than the thirteenth century A.D. It is very doubtful if any of the ancient Mss. from Kashgar which are written on a peculiar paper, covered with a layer of gypsum, are of Indian origin. HOERNLE was of opinion that all of them were written in Central Asia. Much remains to be done in the case of paper Mss. So far there has not been any consistent or sustained effort at the study of the material of these Mss. as it comes down to us from different centres and through different periods. A study in this direction may enable us, for instance, to fix within reasonable limits the dates of given paper Mss ; by a study of its composition, appearance, size and water-marks, if any, the paper on which Mss. are written may lend itself to chronological classification, and act as an independent witness as to the age of the Mss. by the side of palaeography. In a sense this can act as a check on historical palaeography.

Ink seems to have been used for writing from very early times. It has been surmised by MACKAY and others that the specimen of a theriomorphic jar found at Mohenjo Daro in the shape of a couchant ram with a deep hollow in the back may have been an ink-well. Coming to more well-known times, the statements of Nearchos and Q. Curtius make it very probable that ink was used in India already during the 4th century B.C. The Kharoṣṭhī Documents from Khotan prove its popularity at least in the 1st century A.D. But the oldest specimen of writing with ink so far known is found on the relic-vase of the Stūpa of Andher and is certainly not later than the 2nd century B.C. Painted inscriptions are still found in the caves at Ajanta. The Jains have later used coloured ink extensively in their Mss. Besides chalk, red lead or minium (*hīngula*) was used as a substitute for ink, already in ancient times.

The general name of an 'instrument of writing' is *lekhanī* which includes the stilus, pencils, brushes, reed and wooden pens. Already in the 4th century B.C. the professional writer is called *lipikara* or *libikara*; in the 7th and 8th centuries A.D. the writer of documents is called *divirapati*; since the 11th century the professional writer is also referred to as *kāyastha*, although as a caste name it first occurs in the Kaṇasva inscription of A.D. 738-39. Other designations of the writers of inscriptions are *karana(ka)*, or more rarely *karāṇin*, *śāsanika* and *dharmalekhin*. Calligraphically Indian Mss. are not significant.

It is also necessary at this stage to know the external arrangements of inscriptions and manuscripts regarding lines, grouping of words, punctuation and other details.

Already in the earliest inscriptions incised on smoothed stones the inscribers have tried to form regular straight lines and to make the upper ends of the *mātrkāś* of equal height. This effort on the part of Aśoka's masons has rarely succeeded in more than a few consecutive words, but in other documents of the same period, as in the Ghasundī Stone inscription, the later and still valid principle has been more carefully observed, according to which only the vowel signs, the superscribed *ra* and similar additions may protrude above the upper line. The lines of the Mss.

are always very regular, even in the earliest specimens, such as the Prakrit *Dhammapada* from Khotan or the Fragments of Buddhist Dramas found in Turfan, and probably have been made with the help of a straight edge. In the ancient palm-leaf Mss. and later in paper Mss. also, the ends of the lines are marked by vertical double marks or lines, running across the whole breadth of the leaves. In the Mss. the lines always run horizontally, from top to bottom.

In addition to the usual method of writing words continuously without a break, up to the end of a line, of a verse, half-verse or any other division, we find already in some of the oldest documents instances of the separation of single words, or groups of words which belong together, either according to their sense or according to the clerk's manner of reading. Thus in the Kharoṣṭhī *Dhammapada* from Khotan, each line contains a verse or half-verse. In other old Mss. such as the Bower Ms. single words and groups of words are often written separately, apparently without any principle which can be determined.

Signs of punctuation are not found in Kharoṣṭhī inscriptions. but in the Prakrit *Dhammapada* there is a circular mark, often made negligently, but resembling the modern cipher, at the end of each verse. At the end of a Vagga appears a sign which is found at the end of various inscriptions also and which is probably intended to represent a lotus. Brāhmī, however, furnishes a large number of punctuation marks from the earliest times. BÜHLER enumerates eight signs, the single, double and triple daṇḍas or vertical strokes, representing respectively the separation of groups of words or prose from verse, the end of sentences and the end of the document ; single and double horizontal strokes, a double vertical followed by a horizontal stroke, a crescent-like mark with or without a bar in the middle. The teaching of the inscriptions with reference to the history of Indian punctuation may be summarised as follows : ' During the earliest period up to the beginning of our era, only single strokes, either straight or curved, are used, but their use is rare. After the beginning of our era, we find more complicated signs. But up to the 5th century their use remains irregular. From that time onwards, we

have, especially in the praśastis on stone, more regular systems of punctuation. The Mandasor Praśasti of A.D. 473-74 proves the existence of the still valid principle, which requires one stroke after a half-verse and two strokes at the end of a verse. But up to the eighth century there are various copper-plates and stone inscriptions, especially in the south, without any punctuation.¹⁵

Since writing, like any other human activity, is not infallible, there are bound to occur mistakes while engraving inscriptions or writing on birch-bark, palm-leaf or paper. These may roughly be divided into two categories : (a) erroneous words or passages and (b) omission of words, letters or phrases, left out by mistake. In the earliest inscriptions, like the edicts of Aśoka, erroneous passages are simply scored out. Later, dots or short strokes above or below the lines are used to indicate clerical errors. These same signs occur in Mss., where however, in late times, the delenda are covered with turmeric or a yellow pigment. In Aśoka and other early inscriptions, letters and words left out by mistake, are added above or below the line without any indication of the place to which they belong, or they are also entered in the interstices between the letters. In the later inscriptions and Mss. the spot of the omission is indicated by a small upright or inclined cross, the so-called *kākapāda* or *hamsapāda*, and the ad-denda are given either in the margin or between the lines. A *svastika* is sometimes put instead of the cross. In South Indian Mss. the cross is used also to indicate intentional omissions. Elsewhere, intentional omissions, or such as have been caused by defects in the original copy or exemplar, are marked by dots on the line or by short strokes above the line. In some Mss. the space is left blank. The use of the so-called *avagraha* sign, indicating the elision of the vowel *a*, has been traced first on the Baroda copper-plate of the Rāṣtrakūṭa king Dhruva dated A.D. 834-35. A *kuṇḍala* or ring, and a *svastika*, were utilized to mark illegible passages.

Abbreviations are first found in certain inscriptions in West-

¹⁵ *Indische Palaeographie*, pp. 84-85.

ern India, about 150 A.D., to wit in that of Siri Pulumāi, Nasik No. 15, and of Sakasena-Māḍharīputra or Sirisena, Kanheri No. 14. In the North-West they are common from the Kushana period. The commonest are those indicating the year, season, month and day and even the fortnight. From the 6th century, the inscriptions of Western India offer sporadically abbreviations for other words, such as *dū* for *dūtaka*. Since the 11th century, abbreviations of titles and the names of tribes, castes and so forth, become very common. The same holds good for Mss.; they are noticeable even in the Kharoṣṭhī *Dhammapada*, *gā* representing *gāthā*.

The pagination of Mss. is dependent on the leaf as the unit and not the page. The leaf or *pattra* is numbered on the first page or *pr̥ṣṭha* in the South, on the second elsewhere. A few birch-bark leaves found in Central Asia in the Macartney Collection and written in the North Indian (Gupta) Brāhmī characters show the numbering of the leaves on the first page of the leaf on the basis of which BÜHLER assigned them to South India. HOERNLE was, however, of the opinion that the North Indian characters disproved its connection with South India, and this method of marking may have been independently current in Central Asia as instances of paper Mss. with Central Asian Brāhmī help to prove, from the Macartney Mss. themselves.

Wooden covers, cut according to the size of the sheets, were placed, on the *bhūrja* folios and palm-leaves, which had been drawn on strings, and this is still the custom even with the paper Mss. In the South the covers are mostly pierced with holes through which the long strings are passed, wound round the covers and knotted. This procedure was usual already in early times and was observed in the case of palm-leaf Mss. from Western and Northern India. In Nepal the covers of particularly valuable Mss. are sometimes made of embossed metal. The Mss. which have been thus prepared are usually wrapped up in dyed or even embroidered cloth. In Kashmir, according to the Muslim usage, Mss. are often bound in leather.

Such Mss. were generally preserved in libraries attached to temples, colleges, monasteries, courts of princes or in the houses

of many private individuals. The ancient name for the library is *bhāratībhāṇḍāgāra* or *sarasvatībhāṇḍāgāra*. It is reported of the poet Bāṇa (about 620 A.D.) that he kept his own reader, so he must have possessed a considerable private library. A famous royal library of the middle ages was that of King Bhoja of Dhārā in the 11th century. On the conquest of Mālwa, about 1140 A.D. Siddharāja Jayasimha transferred it to Anahilvad where it seems to have been amalgamated with the court library of the Caulukyas. In the course of centuries these libraries became exceedingly well stocked. Thus BÜHLER found over 30,000 Mss. in two Jain libraries at Cambay, and over 12,000 in the Palace Library at Tanjore. The library of the Caulukya Viśaladeva (A.D. 1242-62) is said to have furnished the copy of *Naiṣadhīya*, on which Vidyādhara wrote the first commentary of the poem, and the Ms. of the *Kāmasūtra* according to which the *Jayamaṅgalatikā* was composed by Yaśodhara. One of the Mss. of the *Rāmāyaṇa* in the library of the University of Bonn has been derived from an exemplar in Viśaladeva's collection. In this way we have some evidence as to the existence of Mss. and libraries housing them since the 7th century A.D. at the latest within India, although Indian Mss. of a much earlier date have been found in the collections discovered outside India.

Thus although the art of writing was certainly known to India from the age of the Indus Valley civilisation, and traces of inscriptions seen in the seal amulets of that period, and documents in the shape of inscriptions belonging to the 4th century B.C., the existence of written texts is not very much in evidence. The antiquity of the oral tradition connected with Vedic studies is certainly very great, and even if written texts did exist their transmission through writing seems to have been of secondary importance as compared with the oral transmission. Even Patañjali (about 150 B.C.), whose great commentary on Pāṇini's *Aṣṭādhyāyī* must have been composed in writing, takes no notice of writing as such. In fact he explains that the verbal base *diś-* is *uccāraṇakriyā*, and the Pāṇinian tradition has always been oral, treating solely of the spoken sounds and never of written characters. The doctrine of this school, *pratijñānūnāsikyāḥ pāṇinīyāḥ*,

well illustrates this principle. Even when writing became more common in the later ages, transmission of important works was not so much documental as oral, and we have the story of a Benares Paṇḍit going to Nadia in the middle ages and bringing back the entire text of a famous classic of the Navyanyāya school in his colossal memory.

As a result of this more orthodox and traditional method of oral transmission of texts, the religious literature of the Hindus was preserved in a greater degree of purity than secular literature, since the pupil had to repeat them after the teacher and impress them on his memory. In this manner the hymns of the *Rgveda*, as we read them today in our printed editions, have remained *almost* unaltered, word for word, syllable for syllable, accent for accent during the last three millenniums. But with secular and popular literature the case was somewhat different. Here the texts were certainly exposed to numerous disfigurements, since every teacher or reciter considered himself entitled to alter and to improve, to omit and to add, *ad libitum*, and textual criticism here faces a difficult and often impossible task when it desires to restore their texts to their oldest or original form. Moreover there was a chance that the original tradition might be interrupted and revived later on in parts only, as is the case with the Jain canon, splitting the original Āgama into several mutually related or contradictory groups.

The transition from oral to written or documental transmission must have come about gradually. With the large group of texts to be transmitted orally, the number of competent people having mastery of all the allied groups must have decreased in proportion to the extent of the texts, giving rise to definite lines of oral transmission. We know in the case of Buddhist and Jain religious literatures that the task of recording their canons was entrusted to definite councils which had thus to assemble at one place these scattered lines of transmission and consolidate the texts known severally to definite schools of transmission at one point. We have knowledge of several such councils for fixing the texts of both Buddhist and Jain scriptures. But literary history is not so fortunate as to record such events with reference to other

texts. Even in the cases of these recorded events we have no definite information as to the method employed in consolidating these scattered texts into a uniform whole ; we do not know, for example, whether they were actually written down or again merely transmitted orally by a central school.

Just as there was the possibility of a break occurring in the oral transmission of texts interrupting their original tradition, there was definitely a greater chance that the written text in its transmission would be affected by graver interruptions. We have seen the nature of the writing material used in ancient and medieval India, and from the fact that the majority of Indian Mss. on which our texts rest are not earlier than the 10th century A.D. and most of them certainly later than the 13th century, we can easily understand the perishable nature of the written document. Thus the preservation of texts, which did not have the good fortune of being orally transmitted like the great majority of sacred texts or even the epic or purāṇic material, was mainly confined to collection of Mss. and copying them down. This copying was so important that in the later Purāṇas, in Buddhist Mahāyāna texts and in modern additions to the old epic, the copying of books and the presentation of Mss. is praised as a religious act, worthy of great merit. The importance of this activity may be gauged from the fact that the Mss. from which we obtain most of our texts, seldom reach to a great age, and the thousands of texts which have been thus preserved to us are not the original copies of the texts but merely copies of copies to an undetermined degree. We are thus indebted to the unceasing copying activities of the ancient and medieval Indian scribes for the great heritage preserved for us in the surviving or extant Mss. If we could only unravel the literary activities of the last two thousand years in India, we would probably be shocked by the number of texts which we have irretrievably lost owing to many causes. We have often references to texts of well-known authors in extant Mss. which are not to be discovered so far ; similarly quotations from the works of authors may not be traceable sometimes to the extant Mss. of their texts.

In the case of inscriptions and copper-plate grants or the

legends preserved in coins or other inscribed material, we have often to deal with certified copies of the original document. The mistakes, if any, are due to the faulty execution of the inscriber or inscribers officially working under the direction of the author, or a commission authorised by the author. As the material is durable there is no question of transmission here, and these documents have for us the value of the original which may have been written on birch-bark or palm-leaf for the guidance of the mason-inscriber. Such is, however, not the case with the Mss. In the absence of mechanical processes which have only been developed during the last few centuries for multiplying the copies of a given Ms. it was necessary to copy it by hand transcription, syllable by syllable, word by word. This was necessarily a slow and tedious process, but either due to secular or religious considerations, the copying was done and to the extent to which it was required. Thus the reproduction of any number of copies of a given text, according to requirements, was made only by hand transcription from the actual copy or exemplar before the copyist. Hence all these are called 'manuscripts' or manuscript copies. The material was either birch-bark, palm-leaf or paper as we have seen above. The urge for copying an old and crumbling Ms. depended upon its importance ; before Mss. were actually collected in libraries, this copying may have been done individually by the persons in charge of the Mss. and later perhaps at the direction of the owners of the libraries. In the interest of the preservation of texts this periodical copying of Mss. was essential, the crumbling exemplar gradually becoming replaced by a fresh copy. Rājaśekhara has an interesting passage in his *Kāvya-mīmāṃsā*,¹⁶ enjoining upon the poet to make or have several copies made of his composition in order to ensure the preservation of his writings. Similar considerations may have guided the authors themselves to have more than one copy of their compositions prepared during their life-time. Moreover, if the work of an author became famous, demands for copies of it might come from different parts of India, either from royal patrons of learning or from the devotees of

¹⁶ *Kane Festschrift*, p. 445.

learning. In this process of transmission the original copy itself might be copied out a number of times, or some copy made in this process might itself become the exemplar supplying the basis for fresh copies. This process might continue indefinitely even at a time when the original Ms. was extant, for we have to deal with a period when travelling was comparatively slow and often a painful experience and even when there was a desire to avail oneself of the original the means might not be at hand.

When we deal with texts we have to consider two different possibilities. As in the case of early Indian literature, produced not so much by individual authors, as by definite schools, and transmitted orally, the reduction to writing must have taken place at different centres of learning or culture at different periods. Where the sacred nature of the texts demanded the greatest accuracy as in Vedic literature, the divergence between the written text and the orally transmitted text would not be great, and there would be uniformity in the text tradition. But where such considerations did not hold good, the written text of a given work of the type considered above would not be uniform; each centre might conceivably have its own local version. This local version in its further transmission would then pass through such a vicissitude as would affect any written text in general, such as constant copying, revision and so on. In any case we shall not be in a position to cite any particular copy as the original of the text, though it may be the first reduction to written form of the orally transmitted text. For between this reduction to writing and the actual composition of the text lie a number of generations of reciters, scholars and redactors who have left their impress on the text as a whole. But in the case of an individual author whose work was also orally transmitted, the extent of the divergence between his original composition and the first written text would not be so great, and the possibility of local versions would be similarly curtailed. In opposition to the heterogeneous elements in the class-compositions orally transmitted, the work of the individual author would show greater homogeneity. The second possibility is that of the author himself reducing his work to writing; this he can do in his own hand or in that of another but under his

CHAPTER 3.

THE ANATOMY OF THE FOWL.

SOME knowledge of normal structure is essential to an appreciation of the changes which result from disease, but exhaustive treatment of the subject is impossible in a book of this kind. The purpose of this chapter is to give a concise presentation of the facts about the structure of the fowl as related to normal functioning, which will perhaps be sufficient for most persons who have to deal with the fowl in health and disease. The reader who is looking for a detailed discussion of the finer points in anatomy and histology is referred to the books and articles listed at the close of the chapter.

The Fowl as a Living Organism.—In comparison with most other animals, birds are often spoken of as fast-living creatures. Structurally, they are among the most highly specialized of vertebrates, many of their modifications being in the nature of adaptations for flight. Their coating of feathers is sufficient to set them apart from all other forms, but they are also characterized by being warm-blooded, by having a high metabolic rate, and by the fact that development of the young takes place, for the most part, outside the body of the mother.

The body temperature of the fowl is higher than that of other domestic animals, and because of a more or less regular diurnal variation the recorded temperatures show a greater range than is found in other farm animals. The average noon temperature is 107.5° F., with a variation in the normal daylight temperature, regardless of breed, from 105° to 109.5° F. Average temperatures for other species of domestic poultry are approximately as follows: duck, 108°; goose, 105°; turkey, 106°; guinea, 107°; pigeon, 109° F.

The fowl is a rapid breather and its pulse-rate is high. For fowls at rest (on the roost at night) the normal number of respirations per minute is about 14–22, and the heart-rate is about 300. Any excitement will cause a rapid acceleration

in the heart-rate. In the young chick the increase is quite remarkable. Bogue (1932) observed that dropping a twenty-four-hour-old chick caused the heart-rate to increase from the normal 300 to as much as 560 beats per minute.

Feathers.—Feathers are epidermal structures, partly embedded in follicles of the skin, and varying greatly in size, color and shape. They help to protect the bird from physical injury, and are of a great deal of aid in keeping the body warm. The wing feathers are, of course, essential to flight.

Most birds are entirely covered with feathers, but in only a very few species do feathers actually grow from the entire surface of the skin. In most species, including the fowl, they are arranged in definite areas or feather tracts, called *pterylae*.

Chandler (1916), who has made a very extensive study of the structure of feathers, recognizes three types—plumules, filoplumes and contour feathers. The plumules are small, downy feathers which are usually completely covered by the contour feathers in adult birds. The filoplumes are excessively slender and rather difficult to see. They appear as hair-like structures and are never developed in sufficient numbers to be of any possible value as a covering. They are really degenerate feathers in which the barbs, or side-branches, never become attached to the shaft, being “shed” as the shaft grows. They are usually entirely covered by the contour feathers.

Contour feathers, in their various forms and sizes, include practically all of the diverse kinds of plumage commonly seen on the body of a bird. They include the remiges, or wing feathers, the rectrices, or main tail feathers, and the coverts, or exposed body feathers, as well as the less conspicuous ear-coverts, eyelashes and facial bristles which are found in some kinds of birds.

The parts of a typical feather are the quill, or main stem, which includes the hollow basal portion, or calamus, and the shaft or rachis; the barbs, branching from the shaft; the barbules, branching from the barbs; and the barbicels, branching from the barbules. The smooth, apparently continuous appearance of the vanes of such feathers as the wing primaries is brought about by innumerable fine hooks on the ventral barbicels which serve to hold the parts of the

almost on every page of the different epigraphical publications in India.

The chief province of Indian textual criticism deals in the main with copies of copies. As we have seen in the Introduction, the texts which have come down to us were copied for the most part, not on stone or other imperishable material, but on birch-bark, palm-leaf and paper; these had to be copied several times at different periods both by way of precaution against wear and tear as well as a means to satisfy the desire of other persons than the first possessor to become acquainted with their contents. This copying was done, as mentioned before, not by any mechanical reproductions of the original such as, for example, the photographic facsimiles of modern times, but through copies made by the human hand directed, more or less, by the human intelligence. If the latter had not been the case, Indian textual criticism would have little to do with Indian texts. Now a copy made in this way can never exactly reproduce that from which it is copied, that is, its *exemplar*. Errors have an inevitable way of creeping in so that a copy, *qua* copy, can never be the equal of the exemplar and may even be much its inferior. The deterioration so produced increases with the number of successive copyings or in other words the degree of error increases in successive transcriptions and with the gradual loss of the autograph and its immediate copies, copies of copies to any degree of descent will have to serve as sources of further transcriptions. Since in transmitted texts generally the degree of error increases continuously under ordinary circumstances, therefore the age of a Ms. is an important consideration, although it is not an absolute criterion for the absence or presence of errors.

This deterioration may be illustrated by a numerical example. If 100 be taken to indicate perfect correctness and the text A is considered to have been copied twice, B from A and C from B then let us assume that the errors of the first copyist have removed 3 p.c. of the truth from his copy B, and the errors of the second copyist have removed 3 p.c. again of the truth from his copy C, which is copied from this B. The relative values of the two copies B and C will be respectively 97 and 94.09. If a copy

D were now to be made from C with the same degree of error, its relative value will then be 91·17. The importance of this is obvious when we remember that the text of most Sanskrit and Prakrit classics is a *transmitted text* or one which has passed through we do not know how many stages of copying.

The process of hand transcription of texts may be compared with the compositor's art in modern printing presses, whether hand-setting or machine-setting is employed. The compositor will first have his 'copy' before him, on the basis of which he selects his type letter by letter. Of course with mechanical advantages at his disposal the errors in composing will be greatly reduced ; but where such devices are not at hand, the compositor may be likened to the ancient scribe, with all his limitations. Instead of writing the text letter by letter, he selects the types, and his eye will constantly shift from the compose to his 'copy' and possibly his mind may be wandering elsewhere unless the text is very interesting to him. As soon as the text is composed, the galley proofs are gone through carefully by a set of proof-readers who compare them with the original 'copy' and mark the corrections of any errors accidentally made. In this sense printing is a corporate work which may be absent in hand transcription. Corresponding to the proof-readers the ancient scribes have at times taken advantage of 'revisers' who went through the transcription comparing it with its *exemplar* and marking the changes or corrections in the Ms. itself. If the author of the text is living, he will himself correct the printer's errors before giving the imprimatur, and if he is dead some representative of the author will do this final proof-reading. In the case of hand-transcribed texts this advantage may not be available generally, even when the author or his representative is alive. Thus in good printing the text is *authorised* and *definitive* as far as that particular edition is concerned ; but not so in the case of hand transcribing where the errors will vary individually ; each successive transcription necessary for multiplying the number of copies will contribute fresh sources of error in the text. But the most fundamental difference is that the compositor has got the autograph as his 'copy,' whereas the copyist may have either the autograph, its immediate

copy, or a copy of a copy to any degree. To the extent by which the copyist is separated from the autograph, to that extent will his degree of error increase. In the case of the compositor the errors remaining will be fewer in comparison ; but still, in spite of the care taken, a few will remain.

The deviations from the original which thus occur in both cases are due to two well known causes : visual errors and psychological errors, and each of these will differ to a greater or less extent with every compositor or copyist. The scribe or copyist is prone to commit both types of error, and thus deviate, even if slightly, from his original. Visual errors comprise substitutions,¹ omissions² or additions³ which the eye of the scribe makes through weakness or inattention. Psychological errors arise from the tendency of the mind to read some meaning into its own mistakes or the mistakes in the exemplar from which the copy is made. The main corruptions in classical texts are largely due to errors of this class. Even the best scribe cannot copy mechanically for long without allowing some play to his intelligence ; even at the worst he hardly ever copies letter for letter any writing that he understands. In most instances it will be found that the scribes copy words and not letters.

The pathology of texts arising from these two main sources of error will be dealt with in another chapter. But some of the characteristics of the scribe may be considered here. Scribal errors found in the transcription may date from the original or autograph itself. The dictum that 'even Homer nods sometimes' (*Quandoque bonus dormitat Homerus*) explains the nature of the errors in the autograph. Even the best authors do not always write worthily of themselves. Lapses from felicity of style, from clearness, from consistency or even—through carelessness—from correct grammar may occur now and then in the best of writings. If this be so in the case of the author who is generally an accomplished scholar, it is much more so in the case of the scribe. He will go on adding, unconsciously and consciously also, to the errors already found in his exemplar. Most of these are due to the default on the part of the scribe or copyist, and they may be arranged roughly in the order in which the volition of the copyist

is absent or present as involuntary (or mechanical), semi-voluntary and voluntary. Another classification of these errors calls them accidental and deliberate.

The exemplar utilized by the copyist may become illegible through damp or constant handling; portions of it may be torn away, or whole leaves may become detached and either lost or misplaced. The weakest parts of a manuscript were the margins, and hence the beginnings and the ends of lines as well as the top and bottom lines were specially liable to injury. So some of the errors introduced in the copy may be due to such external defects of the exemplar. Thus with the famous Prakrit *Dhammapada* fragments discovered by DUTREUIL DE RHINS, where the external injuries to the text caused breaking of leaves, the assembling of whole leaves caused certain errors in SENART's edition.

If the text is extensive, its transcription may be made by one or more than one copyist. In the latter case we have to deal not with the psychology of one scribe but of many, complicating the study of the text tradition. For at this distance of time we cannot say whether the transcription was done at the same place on the basis of a single exemplar or whether the manuscript was assembled from units made up at different places or different times on the basis of different exemplars, for it is quite reasonable to expect that parts of bigger works might have been copied out separately in individual manuscripts. The nature of the material and the palaeographical evidence may indicate to us the chronological strata of the composite parts of such a text. Hence it is necessary to distinguish the different hands which have been at work on the manuscript.

As the texts have come down to us, a manuscript is not usually a clean copy or a single piece of writing. It is very commonly found to contain alterations by erasure, additions or substitutions which are due either to the scribe or scribes of the manuscript, or to some other person or persons called the reviser or revisers. The relative importance of these corrections may be very different.

Every scribe has his own idiosyncracies and every manuscript has peculiarities of its own. The idiosyncrasy of the scribe

appears in traits of handwriting ; in a proneness to certain kinds of error and comparative immunity from others ; in a bias of thought or taste which has influenced his work where he had two or more variants to choose between. Such peculiarities can only be learnt by close and continuous study of the manuscript.

The special virtues of a scribe should be honesty and care, —or in one word fidelity—(and intelligence). But it is rare to find these developed in a high degree ; for however mechanical the transaction may be, human intelligence finds ways and means in an unconscious manner, through visual as well as psychological faults, of introducing fresh sources of error in the transcription. But strange as it may seem, the mechanical copying of a stupid but faithful scribe tells us more about the text than the intelligent but unfaithful transcription of another, more qualified scribe. This fidelity is to be judged by internal tests. A scribe who preserves in his text lacunæ and other faults of his exemplar without trying to correct them is probably trustworthy. If he is faithful in small things he is likely to be faithful in general also. If he scrupulously preserves for instance the special orthographical peculiarities of his exemplar or records the presence of a lacuna or illegibility in what he is copying, he inspires us with confidence.

There are two kinds of transmission by means of which we have received the extant texts. One is the licensed or protected transmission wherein the text is copied under the direction of the author or a representative of the author, or the learned possessor of the exemplar or at the instance of a royal patron employing real scholars to supervise this copying. In other words, control is exercised on the copyist in order to ensure the integrity of the text ; for if such control were not exercised the integrity of the text would be certain to be impaired even during the life-time of the author. The chances of such corruption are infinitely greater when the author is dead. The other type which is probably much more frequent is the haphazard or unlicensed transmission. In this case manuscripts were often copied by stupid and ill-educated men who were not altogether ignorant of the meaning of what they wrote. The handicaps attendant on such privately made

copies at a time when the original exemplars were regarded as luxuries and protected zealously from any encroachment even by the learned may be gathered from the trouble which modern scholars have to undergo in order to secure transcripts of Mss. preserved in some privately owned libraries. One modern case may be cited with reference to the *Dhavalā*, *Jayadhavalā* and *Mahādhavalā*, the only authentic Mss. of which are preserved in the Jain pontifical seat at Mudibidri in South Kanara. It was only with infinite patience, diplomacy and huge expenditure that transcripts could be obtained after a long period.

Now with reference to such transmitted texts we have already mentioned that the extant Mss. show often times the hands of revisers. We do not know either how the Ms. was transcribed or how the reviser corrected the work of the copyist. It may have been through his own unaided efforts that the copyist transcribed his exemplar, or he may have had the assistance of another scribe or reader who read out the text aloud while the copying was done. Similarly the reviser may have gone through the transcript comparing it with the original either by his own unaided efforts or with the help of another who read out from the exemplar. Such corrections are generally made, as said before, either in the margin or between the lines. Passages, omitted by mistake in the copy, would also be shown similarly. Now imagine for a moment the manner in which Mss. travelled from place to place. If a Ms. belonged to a rich patron he might conceivably take it with him in his travels, accompanied by some scholar-companion; there would then be a possibility that in different centres of learning which he visited there might exist other exemplars of the same text, and a comparison of his copy with such exemplars would supply the reviser variant readings, additional passages, etc. which would be noted in the margin or between the lines. As SUKTHANKAR suggests, places of pilgrimages may have played an important part in this revision, correction or conflation of Mss. "It may be surmised", he says, "that celebrated places of pilgrimage like Ujjayinī, Rāmeśvaram, Kāśī, and others, with recitations of the epics held periodically in their famous shrines, have played an important rôle in the dissemina-

tion of the knowledge of local versions among the pious visiting pilgrims, whose number undoubtedly included the bards and the professional reciters of the epics." To a slightly less extent this may apply to other kinds of texts as well, particularly the more popular plays and poems. That some such thing must have taken place can well be inferred from the different types of texts which have been transmitted to us today.

If such corrected copies themselves become the sources of further transcripts, the new copyist has often the choice of a reading, and according to his likes and dislikes he would prefer the one and reject the other. Similarly with the additional passages. This would ultimately hasten the speed with which the texts became corrupt.

In addition to the revision of the transcripts carried out by these so-called correctors, there are certain cases wherein the original author himself revised his autograph several times. We see it often in our days with reference to printed works. But in the absence of such mechanical reproduction, the author might either rewrite his own manuscript entirely according to his revised form, or more likely add or alter in the first autograph itself before making a second autograph of it. In both cases the copyist has before him an autograph corrected or revised by the author himself and he has the choice of two readings, both tracing their origin to the author himself, and he will accept the one and reject the other according to his choice ; or else he may add the rejected reading in the margin or in between the lines. In subsequent transcriptions of this transmitted text the *marginalia* or interlinear readings may be completely omitted.

From an examination of all the available Mss. of *Mālatī-mādhava*, BHANDARKAR concluded that Bhavabhūti had himself made certain alterations in his autograph, and thus in a sense revised it. The same factor is brought out by Todar MALL in his edition of *Mahāvīracarita*. The following two instances may be cited for BHANDARKAR's assumptions : Mm. I 3^a reads in his edition, supported by six out of the nine Mss. collated :

kalyāṇānām tvam asi mahasām bhājanām viśvamūrte, for which the other three Mss. Bh, K₁ and O read :

kalyāṇānām tvam iha mahasām iṣiṣe tvam vidhatse, which appears the better to account for the prayer contained in the following line, and the Ms. C agrees with the first line except in the last two words where it agrees with the minor group. Again in III 7^a we have in the constituted text, based merely on the commentary of Jagaddhara and the Ms. N, the following :

skhalayati vacanam te sraṁsayaty aṅgamaṅgam, which is considered by BHANDARKAR to be better than the reading of the eight other Mss. which show *saṁśrayati* for *sraṁsayati* of the text. The superior reading of the Southern Ms. N might be due to the ingenuity of the learned readers on that side, as the south was for some time the home of culture and learning, but the number of such equally suitable passages places the balance of probability in favour of the author's revisions.

The correctors of Mss. have at times acted also as editors in the sense that they have tried to improve their text by a comparison of different extant Mss. on which they could lay their hands, besides the exemplar used, in their attempts to fill in the lacunæ of the Ms. or correct the errors which have crept into it. In this sense they act as redactors of the Mss.

The ravages of time, the laxity and ignorance of scribes, and the speed with which a work could become corrupt, may be illustrated from the history of the text of *Jñāneśvarī* according to the traditional account. The text composed by Jñāneśvar in Śaka 1212 (A.D. 1290) had already become so corrupt by the time of the poet Eknāth that he had to revise it from the Mss. available to him in the Śaka year 1506 (A.D. 1584), within less than 300 years of the autograph. We have unfortunately no means at present of arriving at the principles employed by Eknāth in his purification of the text of *Jñāneśvarī*, unless we discover several pre-Eknāth Mss. of the text. But he must have had the knowledge that a text could be improved by comparison of different manuscripts in common with other ancient redactors. This explains also why most Mss. contain marginal or interlinear corrections ; that the editors did not work scientifically is not their fault but that of the period in which they lived. This knowledge led to the production of what are known as conflated Mss. or *misch-*

codices, by crossing or intermixing the contents of different copies of a given text available to them with their own exemplar. This crossing or intermixing was not done on any well-established principles and was therefore *eclectic* in a deleterious sense.


Since the transmitted texts were handed down through successive transcriptions from earlier sources ultimately going back to a common source, all the Mss. of a given text, in so far as they are authentic, are related to one another and this relationship can be shown in the form of a pedigree.²

In other words they represent a tradition running along certain determinable lines, but in a majority of cases each strand of this tradition does not remain by itself. As mentioned before, they have been intertwined from the very beginning by the continuous activities of revisers and redactors.

Thus, the manuscript tradition in India shows that while the ravages of time and other causes destroyed the majority of autographs or their immediate copies or even early descendants, their late copies, which have survived to our days, present to us texts in a mutilated or defaced or deteriorated condition. In some cases the injuries done to the text may be of such a nature as to make it almost unintelligible.

A very large number of texts have completely disappeared in India due to ravages of time, vandalism or unintentional destruction, by the unimportance of the text itself and by attacks from worms and white-ants, leaving no trace at all except in some stray references in extant texts. But, fortunately, owing to the unceasing literary activities of Mahāyāna Buddhists, some important texts, Brahmanical as well as Buddhist, but largely Buddhist, have been preserved in the Tibetan and Chinese archives either in Tibetan and Chinese transliterations or in translations. In some cases we have adaptations of the lost texts, the most classical example being that of Guṇāḍhya's *Bṛhatkathā*, irrevocably lost, according to tradition, in its original Pāṣāṇī form, but preserved in two independent Sanskrit adaptations by Kṣemendra and Soma-deva. Information about some of these lost texts is supplied to

² The tests or characteristics by means of which this can be established will be given in the chapter on Recension.

us through the following sources : (1) translations, (2) references by title in extant Mss., (3) citations or quotations, and (4) commentaries. 

While the literary and textual history of India is still a subject for fresh investigation of unlimited scope, certain factors emerge from a study of the extant Mss. We have seen that these Mss. generally fall into one or more strands of a continuous tradition. They are written in the different scripts prevailing in the various parts of the country. Now it is improbable that the professional copyists were acquainted with more than one or at most two scripts in the medieval period. Naturally their copying activities would be confined to either one or two scripts. From this it follows that the manuscript tradition descended in a line parallel to the script in which the exemplar was written. An exemplar would be transliterated into another script by a copyist who knew both scripts, and then this copy would be the source of a fresh line of transmission in that script. The less known a script, the greater the chance of its Mss. following a uniform tradition, unless the correctors or redactors or the scribes themselves were acquainted with more than two scripts and had the opportunities of consulting several Mss. for making these copies. As SUKTHANKAR remarks, this *principium divisionis* is not so arbitrary as it might appear at first sight. It is found from experience that this superficial difference of scripts corresponds, as a matter of fact, to deep underlying textual differences. The only exception to this general rule would be Devanāgarī which was a sort of 'vulgar' script, widely used and understood in India. While this principle is not entirely mechanical or arbitrary, it is also not ideal or perfect. It is contravened, for instance, through the intervention of this Devanāgarī script. Another cause of disturbance is that along the boundaries of provinces using different scripts and speaking different languages, there are invariably bilingual and bi-scriptal zones, and the opportunities mentioned above are operative in mixing the different strands of the tradition represented by the two scripts.

CHAPTER III

SOME FUNDAMENTAL ASPECTS OF TEXTUAL CRITICISM

✓ Textual criticism has for its sole object the interpretation and controlling of the evidence contained within the manuscripts of a text or in documents so that we can reach as far back as possible and try to recover the authentic text or to determine as nearly as possible the words written by the author himself. In other words, it is the skilled and methodical exercise of the human intellect on the settlement of a text with the sole object of restoring it, so far as possible, to its original form. By 'original form' we understand the form intended by the author. Such a restoration is often called a *critical recension*.

✓ According to one accepted practice, Textual Criticism is divided into two processes: (1) Recension (*recensio*) and (2) Emendation (*emendatio*). This is the customary division. By recension is meant the selection of the most trustworthy manuscripts or documentary evidence as a basis on which the autograph or a text standing nearest to it may be founded. This selection is only possible after a thorough critical examination of all the evidence that is available. Emendation is the attempt to eliminate all the untrustworthy elements in the manuscript tradition which even the best documents or manuscripts exhibit. In a sense it is an attempt to transcend the tradition and therefore a deliberate but systematic attempt to overrule the written evidence.

✓ As F. W. HALL says, 'many people tend to regard textual criticism as a disease. But it is neither a disease nor a science, but simply the application of common sense to a class of problems which beset all inquirers whose evidence rests upon the authority of manuscript documents.'¹ Most of these problems are connected with errors introduced in the text through successive

¹ *Companion to Classical Studies*, p. iii.

transcription. And before correcting them the editor is bound to consider the history of the text upon which he is working. Otherwise he may be trying to correct errors which are of such ancient standing as to be incurable by modern methods, or he may be questioning a text which can be traced back to the original author. Hence the classical model, applied to the criticism of Greek and Latin texts, divides textual criticism into four processes : (1) *Heuristics* or assembling and arranging the entire material consisting of manuscripts and testimonia in the form of a genealogical tree or pedigree or *stemma codicum* ; (2) *Recensio* or restoration of the text to its most ancient type possible on the basis of the above material ; (3) *Emendatio* or restoration of the text of the author ; and (4) *Higher Criticism* or separation of the sources utilized by the author.

The first process enables the editor to classify the manuscript evidence into definite strands of tradition, either totally independent or mutually related by intermixing. This begins with the investigation of the evidence to be found in the transmitted form of the text for which we have to rely on *manuscripts*. These may be either extant or non-extant. The evidence of extant manuscripts must be ascertained by *collation*. To collate a manuscript is to observe and record everything in it which may be of use for determining what stood in the source or sources from which it is derived. Some practical hints for collating are given in SUKTHANKAR'S *Prolegomena* to the critical edition of the Ādiparvan of the Mahābhārata and in EDGERTON'S *Pañcatantra Reconstructed*. In the case of a poetical text the single stanza may be taken as a unit, and some good Ms. or a reliable edition taken as the standard, and this may be written syllable by syllable in properly divided squares on a single sheet of paper at the head. Deviations from this may then be indicated in the corresponding squares. The left-hand margin will show the manuscript collated while a larger right-hand margin will be reserved for special remarks, for additional passages, etc. Full details about the method of collation used for the critical edition of the Mahābhārata may be studied from SUKTHANKAR'S *Prolegomena* referred to above.

The method employed by EDGERTON is as follows : He first selected the versions of the *Pañcatantra* which, on the basis of previous studies, could be assumed to contain all, or at least practically all, the evidence which could be used in reconstructing the original *Pañcatantra*. Then he undertook a minute comparison of all the materials found in each version in so far as they corresponded to materials found in any of the others. For this purpose the text was divided into the smallest possible units, each unit consisting, as a rule, of a single prose sentence or sometimes of a part of a sentence. The collation then proceeded along lines similar to those referred to above. In this manner both prose and verse texts may be collated.

✓ On the basis of such collations the genealogical relationship of the manuscripts becomes clear, and this may then be represented by means of a *stemma* or pedigree.

✓ The second process is the process of interpretation. It interprets the written evidence of the manuscripts, weighs them in certain lights, and settles the text on their basis to the oldest possible form on principles which will be stated in the next chapter. This aspect is really the antiquarian phase of textual criticism and its aim is to discover what is the earliest ascertainable form of the text with which we are dealing.

✓ The third process is fundamentally to arrive at the text of the author, and in a sense getting behind the written evidence by overruling it where necessary from certain intrinsic considerations. This is possible because most of our classical authors do not stand alone. As HALL says, if every classical author stood alone, and if the only surviving evidence of his work was in the shape of manuscripts, it would not be possible to penetrate far into the history of the text which lies behind the manuscripts. It might often be possible to say that a manuscript or group of manuscripts was copied from an *archetype* of a certain period and of a certain handwriting, but the point at which the inquiry would have to stop would still not be very far removed from the age to which the earliest manuscripts belonged. The critic would then be in the position of a mining engineer who could only argue as to the course of a gold reef from the outcrop visible above the

surface. And just as the engineer will get his evidence of the course of a reef by boring below the surface at various points, so too the textual critic can often find external or indirect evidence of the condition of a text in the ages before the existing manuscript tradition begins. Such indirect evidence is often termed *testimonium* (plural *testimonia*) in large critical editions and given a separate section. These are generally divided into the following categories:

✓ Anthologies (or *Florilegia*) or collections of extracts, either medieval or ancient. Thus we have Hāla's *Sattasāi*, Śārṅgadharma's *Paddhati* or Jalhaṇa's *Sūktimuktāvali*, to mention a few only. The evidence derived from such quotations made from an ancient text by other authors are often exceedingly valuable, as very often such authors antedate the oldest available Mss. of the text by several centuries.

✓ Translations from one language into another may be of help in restoring the original text or *vice versa*. Especially where the translation was made at a period anterior to the oldest surviving Mss. of the text in question, its value will be exceedingly great and its evidence will form an indispensable part of a proper *apparatus criticus*. For a majority of Mahāyāna texts in Sanskrit, the greatest evidence for the reconstruction of the original text is from Tibetan and Chinese translations made at an early period. For the Mahābhārata we have the Javanese (c. A.D. 1000) and the Telugu (c. A.D. 1025) adaptations or epitomes of the original text in Javanese and Telugu respectively of the eleventh century, antedating the earliest extant Mss. of the Mahābhārata again by several centuries.

✓ Direct Quotations of many passages of original texts are found dispersed in later literature, particularly of a technical nature. Thus in works on Grammar and Alankāra, for instance, are to be found numerous citations from earlier works as illustrations of the particular rules discussed or types defined. These may or may not be cited with the author's name.

✓ Obvious Imitations (including Parodies) may be used to restore the words either of the imitator or the imitated. We have for instance the famous *Meghadūta* of Kālidāsa worked

into the body of another poem entitled *Pārśvābhyudaya* of Jina-sena in such a way that each stanza of the latter borrows one or two lines from the former.

Epitomes and Adaptations (including Paraphrases) also help us to restore partially what was in the original text utilized for such epitomes or adaptations. Thus the *Bhāratamañjarī* by the Kaśmīrī poet Kṣemendra is an epitome of the Kaśmīrī Version of the *Mahābhārata*, and throws some light on this Version.

Ancient Commentaries are another source of a subsidiary character ; if the text commented upon is quoted either completely or in the shape of *lemmata*, such citations help us in reconstructing the corresponding part of the text.

In the case of texts going back not to a single author but to a school of traditional literature as is represented for instance in the *Mahābhārata* or the various *Purāṇas*, *parallel versions* of minor episodes or passages are to be met with in other works. Thus there is a parallel version of the *Śakuntalā* episode (*Mahābhārata* I, 62 ff.) in the *Padma-purāṇa*.

The last stage in textual criticism is the separation of the sources utilized by the author. Although some preliminary studies in this line have appeared by such eminent scholars like LÜDERS (*Die Sage von R̥ṣyaśṛṅga*), it is yet too early in the history of Indian textual criticism to attempt this task, in the absence, particularly, of scientifically edited texts of well-known classics. So for the purposes of the present work this fourth stage in the critical estimate of texts will not be included.

CHAPTER IV

THE PROBLEM OF CRITICAL RECENSION

(We shall assume that the editor has decided to bring out a critical edition of a text which has not been edited at all or at least not critically edited so far. The first thing that he has to do is to find out the evidence available for this purpose, which will be in most cases transmitted handwritten copies or manuscripts.) Thanks to the continued efforts of scholars over a period of nearly a century we have today a large number of catalogues, hand-lists and even descriptive catalogues¹ of Sanskrit, Prakrit and Vernacular manuscripts deposited in the many famous public libraries ; sometimes, as in the case of MITRA's *Notices*, we have even mention of Mss. to be found in private possession. In the case of Sanskrit Mss. the excellent Catalogus Catalogorum of AUFRECHT provides in general consolidated information about different texts and the Mss. of such texts known to be in existence from the various notices, descriptions, etc. which have been published in individual catalogues, hand-lists or journals.¹ Although the work of collecting and describing Mss. is still in progress and fresh information is added from year to year, the editor has to be satisfied with whatever information he can get from available sources. The first task then is to find what Mss. are available for his purpose and then have access to them for the purpose of collation and continuous study. He has to satisfy himself that he is dealing with genuinely transmitted copies of the text by continuous reading of the documents and noting their peculiarities.

After all the available Mss. have been collated and carefully examined the editor has to select all the really trustworthy Mss. as his witnesses for the constitution of the text. Just as the general character of a witness has a bearing on the credibility of any deposition which he makes, so also the general

¹ or French *Catalogues raisonnés*.

character of a Ms. will aid us in determining the value of its testimony with regard to a particular reading. Of two Mss., say *A* and *B*, a comparison shows that wherever they differ, the number of readings which are certain or highly probable is much larger in *B* than in *A*, then the superiority of *B* in general trustworthiness may be taken into account in such cases where the choice of reading between *A* and that of *B* is difficult. This is not an absolute criterion for the genuineness of all the readings of *B*, for *A* may chance to preserve in some cases the true reading as against *B* although it may be the worse of the two Mss. Thus the Ms. *B* which PISCHEL collated for the second edition of *Śākuntala* abounds with blunders of every kind such as the senseless *āmuṣmān* for the common word *āyuṣmān*, an index of the learning and intelligence of the scribe and though it seldom presents an original reading there are a few instances where it does : thus at I-4-4 its reading *ahiriādu* for *ahinīdu*, is also the reading of the shorter recension of S. India.)

In weighing the relative trustworthiness of Mss. so selected it must be remembered, as mentioned already, that each Ms. has its own peculiarities. These peculiarities can be learned only by close and continuous study of the particular manuscript, and to learn these is the essential part of the textual critic's business. In short the doctrine is that all the trustworthy witnesses to a text must be heard and heard continuously before a verdict is given. (It is, as WOLF says, a *recensio* and not a mere *recognitio* that is required.² This is even more essential in those cases where the text has come down to us in a single manuscript. An intimate acquaintance with the general characteristics of these solitary witnesses is needed in arriving at a conclusion that a particular reading is corrupt, and in attempting to amend it. This is especially the case with inscriptions. On the other hand it becomes increasingly difficult to compare Mss. in respect of their general trustworthiness when their number is large. It is absolutely necessary in these cases to enquire whether, and to what extent, the genealogy of the Mss. can be traced.

² HALL, *op. cit.*, p. 122.

Thus the problem of Recension is not always simple and depends to a large extent on the main types of tradition which the extant witnesses of the text themselves present. Consistent with the proviso mentioned in the preceding paragraph about the need of continuous study of each manuscript preserved as a witness of the text, we may consider here for the sake of convenience the main types separately.

Under favourable conditions, when a text is not completely lost, it may be transmitted and preserved in one of the following ways : (i) In one manuscript only and (ii) in more than one manuscript.

Now when the transmission rests only on one extant manuscript (*codex unicum*), the critical recension is regarded as the most accurate depiction and decipherment of this solitary witness. This is the case with the majority of inscriptions and copper-plate grants. Similarly with the fragments discovered in Khotan and Turfan, such as the fragments of Buddhist plays, edited by LÜDERS, as also texts which have survived only in a single known extant manuscript like Viśvanātha's *Kośakalpataru* or Nānya-deva's *Bharatabhāṣya*.

The genealogical method rests on considerations of a simple kind which we have already discussed in the earlier chapters. But its employment is of recent date. For before the days of the railways few scholars had the means of consulting all the Mss. of any given work scattered in all the distant libraries and private collections of this vast sub-continent or even getting collations accurately prepared. At the same time the modern mechanical process for obtaining facsimiles of the required Mss. were unknown.

The varying written copies of a text, being transmitted copies handed down through centuries of written transmission, cannot be ultimately independent of each other ; they are descendants of a common original, now probably lost, descended through various streams of tradition. If this common original is a written archetype, there will be a complete concatenation of copies and exemplars finally reaching back to it.) If we can discover all the facts relative to their transmission, we can construct an

accurate pedigree of their descent. The nearer we are to achieving this, the better we shall be able to sift the spurious readings from the genuine.

The general principle according to which we decide on the derivation of manuscripts is that, apart from accident, identity of reading implies identity of origin. The source of the reading may very well be the author's autograph, but, if not, it must be some manuscript in the line of transmission. Suppose there are fifteen manuscripts of a given text, and in a given passage eight of them show one reading as against seven showing another reading. This fact shows that the common ancestor of the eight had the one reading, and the common ancestor of the seven the other if there is no contamination.

The more usual tests to decide the genealogical relationship between manuscripts are :

1. Omissions of words and passages and transpositions of passages. Omissions are the surest test of affinity, says HALL, since if they are numerous they can hardly have arisen by accident, and all of these cannot have been imported into a text by a comparison with other manuscripts. They frequently imply a far closer connection than could be inferred by identity of reading, and often show the immediate descent of one manuscript from another.³

2. Agreement in a number of peculiar readings or in other peculiarities. It must be remembered that the relationship between manuscripts is not always simple ; each manuscript accepted as a factor in constructing the text is not necessarily descended from one single ancestor, so that complete identity of reading is not always possible from manuscripts derived ultimately from the same source.

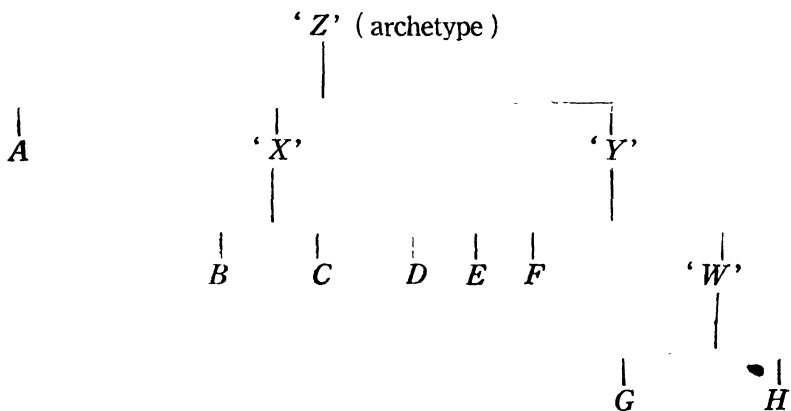
³ This rule compares favourably with the law in Linguistics that while conservations may indicate the community of source of the languages studied, common innovations are the true indicators of the mutual relationship between them. Identity of reading in general may be compared with conservation, while omissions mentioned above may be viewed as innovations for the purpose we have in view, namely the tracing of the mutual relationship existing among the manuscripts.

The collations of the manuscripts which the editor has prepared as a basis for the critical recension will indicate in general such agreements on the strength of which he will be able to classify the manuscripts.

It may sometimes happen that the peculiar resemblances of two manuscripts may not be such as to warrant the derivation of one from the other, but might be sufficient to establish some connection between them. We infer that this connection arises from community of source; in this manner we arrive at the idea of a family of manuscripts.

Let us suppose that there are eight manuscripts of a text which we designate as *A B C D E F G H*. If we find that of these *A* stands apart in the peculiarities of its readings, showing no great similarity to any of the other seven, while *B C* on the one side and *D E F G H* on the other side much resemble each other though differing considerably from the rest, we can express this fact by saying that *B C* form one family, descended from a hypothetical common ancestor which we may indicate by '*X*' and *D E F G H* another family, descended from a hypothetical common ancestor which we may call '*Y*'. We have already seen how errors creep in continued transmission of manuscripts; it will be reasonable then to expect that the readings of '*X*' will be freer from errors than those of either *B* or *C*; and since '*X*' is the hypothetical source from which *B C* derive, its readings will be of a higher antiquity and authority than any of the readings of *B* and *C* taken singly. The readings of '*X*' are naturally to be deduced by comparing those of *B* and *C*. For if '*X*' were extant, we would then be able to verify the fact that '*X*' is more ancient and more authoritative than *B* and *C* taken singly, and to explain at least some of the scribal errors which have crept into the text of *B* and *C*. Similarly the readings of '*Y*' will be of a higher antiquity and greater authority than those of *D E F G H* taken singly. Now if we find that in the family *D E F G H*, *G* and *H* agree among themselves to a greater extent than with *D E F* in the peculiarities of their readings while preserving their general family characteristics, it would follow that *G* and *H* are descended from a common hypothetical ancestor '*W*,' which be-

longs to the family *DEF* 'W', and that the readings of 'W' reconstructed by the comparison of those of *G* and *H* are of greater antiquity and of higher value than the latter taken singly. Nor need we stop here; we may compare the readings of *DEF* and 'W' and arrive at 'Y' and further compare those of 'Y' and 'X' with each other and with those of *A*, and thus deduce the readings of a still more remote ancestor which we may call 'Z'. This 'Z' will be the hypothetical common ancestor of all the eight manuscripts which are extant of a given text. It is with this 'Z' that the transmission of the manuscripts first breaks off into several streams or lines of descent, such as *A*, 'X' and 'Y', and therefore the remotest common ancestor which can be restored by a comparison of the readings of *A*, 'X' and 'Y' from the extant transmitted copies of the text. It is therefore called the *archetype* of all the extant manuscripts, and we may thus get a pedigree of manuscripts or a *stemma codicum*, which may be given as follows:



In the above *stemma* the hypothetical parent codices 'X' and 'Y' may be called the sub-archetypes or the non-extant immediate descendants of the archetype which separated into distinct lines of descent or transmission as evidenced by extant manuscripts.

The simplest application of the genealogy of manuscripts in sifting the readings is in connection with a family of manuscripts

where it can be shown that one of them is the source from which all the rest are derived. If there are twelve manuscripts *A B C D E F G H I J K L*, and the eleven manuscripts commencing with *B* and ending with *L* are shown to be derived from *A*, the problem of recension is at once simplified, for eleven of these manuscripts have no independent value for the purpose of determining the original reading ; since, wherever they vary from their parent codex *A*, the variation must be a result of the scribe's idiosyncracies and errors or conjectures. All the derived copies may therefore be disregarded except in places where the original source has been damaged since these copies were made. The cardinal principle of the textual critic is to utilize only independent witnesses of a given text ; hence the derived copies have no value or very little value as independent witnesses. Therefore, except in special conditions, the derived copies of an extant parent codex are to be eliminated.

But great caution is necessary in examining the alleged proofs of such a derivation ; a clear demonstration of it must be obtained before the elimination of the alleged copies. It may happen that the copyist of a given manuscript has restored the corrupt reading of his parent codex through felicitous conjecture or by comparing it with a different exemplar ; if the latter be proved, then his copy retains its claim to be an independent witness in such places, and cannot altogether be eliminated.

When the parent codex is non-extant, as for example '*W*' '*X*' or '*Y*', its readings have to be reconstructed from the evidence of its descendants. If we have done our work properly, the text that we arrive at for '*X*' and '*Y*' will be freer from errors of copying than the texts of *B* and *C*, and *D E F* and *G H* respectively, and that of '*Z*' freer from such errors than that of any extant manuscripts. The process of elimination here is with respect to those manuscripts which have no independent value in the reconstruction of the parent codex, subject to the same safeguards and conditions as in the earlier case considered.

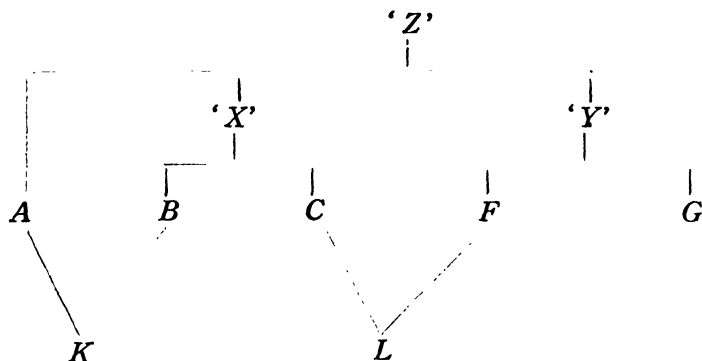
In the *stemma* given above the reconstructed readings of '*X*' and '*Y*' may either agree or differ. If they agree then they must belong to '*Z*', that is, they must be original ; if they

differ both cannot be the readings of 'Z'; one of them may then be the reading of 'Z', while the other may be due to transcriptional error or to sporadic conjectures of the copyist; we have here the choice of two readings which are called *variants* one of which may be that of 'Z'. In such cases 'X' and 'Y' along with A may be called *variant bearers* of the parent codex 'Z'. Similarly, in the case of 'W' G and H are the variant bearers. If in the 'Y' family of manuscripts only D and G are extant, then the readings of 'Y' will have to be reconstructed from the evidence of only D and G, and when these two disagree we have to make a selection of the two subvariants, and the readings so reconstructed will be the variants for 'Z'.

Our procedure so far has been on the assumption that there has been no mixture or crossing between the families 'X' and 'Y'. But this is mostly an ideal condition to be wished for, as in general manuscripts are not so uniformly derived in the same strand of tradition. A number of manuscripts have been produced by a combination of two or more different manuscripts. In the absence of a regular history of the transmission of texts it is exceedingly difficult to unravel the different strands in their independent transmission, as more often than not they appear intertwined even from an early period. This process of intertwining of the different strands of transmission is termed *crossing* or *intermixing* and the codices so produced are called conflated manuscripts or *misch-codices*.

That a text may be improved by the comparison of two codices is not a modern discovery. We have examples of variant readings (pāṭha or pāṭhāntaras) mentioned by commentators like Devabodha and Arjunamiśra of the Mahābhārata, and an interesting experiment in medieval textual criticism has been referred to by Mr. GODE in his paper 'Textual Criticism in the Thirteenth Century.'⁴ The accompanying diagram indicates a *stemma codicum* where K and L are conflated manuscripts, being formed by the intermixture of A and B and of C and F respectively.

⁴ Woolner Commemoration Volume, pp. 106-108.



There need not be any limit to this fusion ; and the greater its extent, the more difficult does it become to trace the transmission of a text. As WESTCOTT and HORT say, 'The gain or loss to the intrinsic purity of texts from mixture with other texts is, from the nature of the case, indeterminable. In most cases there would be both gain and loss; but both would be fortuitous, and they might bear to each other any conceivable proportion.'⁵ Thus whether such crossing produces an intrinsically better text depends of course upon the judgment and insight of the crosser. Since crossing or intermixture implies the exercise of choice, it may be accompanied by other efforts at improving the text; in this case the text will, in all probability, suffer. For even in the case of emendations made by scholars, there is only a small portion representing real improvement of the text ; naturally the scribal emendations represent even a smaller proportion of real improvements.

The value of a conflated manuscript lies particularly in such cases where one of the manuscripts from which it is compounded is lost. Then it will have the merit of an independent witness to such of the readings of the lost manuscript and therefore of preserving traces of the truth which would otherwise be irrecoverable.

A very interesting case of such conflation is with reference to the *Pañcatantra* tradition. By a detailed and careful study of

⁵ Quoted by POSTGATE, *Companion to Latin Studies*, p. 795.

the material EDGERTON tries to establish four independent streams, represented as follows:

1. Tantrākhāyikā, Simplicior and Pūrṇabhadra.
2. Southern Pañcatantra, Nepalese Pañcatantra and the Hitopadeśa.
3. The Bṛhatkathā versions (namely, Somadeva and Kṣemendra).
4. The Pahlavi versions.

To the first group belongs also Kṣemendra in part, since apparently he used Tantrākhāyikā ; therefore his text is contaminated with Tantrākhāyikā, and significant only when agreeing with 2 and 4, but not with 1. On the other hand Pūrṇabhadra made partial use of at least one different stream, not secondarily related to any of the others. So we have traces here of at least a fifth stream, which however nowhere appears in a pure and uncontaminated form in the texts which we have. Consequently for this hypothetical fifth stream the value of Pūrṇabhadra would be that of an independent witness.

The genealogical method, strictly speaking, cannot be applied to conflated manuscripts as such. Their mutual relations are more often than not very difficult to disentangle. Occasionally however we may detect a common strain in these manuscripts, shown by their agreements in peculiar corruptions or in good readings which would have been hard to discover by unaided conjecture. This will lead then to a partial application of the genealogical method to portions of manuscripts.

It may sometimes happen that good readings are found in manuscripts which are generally untrustworthy, and which are not worth citing continuously. These may then be cited only in such cases where their testimony is helpful in restoring the text.

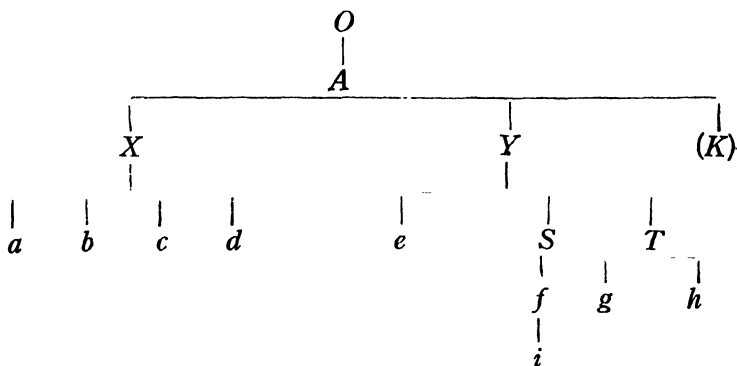
In a large number of cases, due to complex mixture of the different lines of transmission, it may happen that the genealogical relationship between manuscripts is too obscure to afford ground for the application of such a method. This is the case, for instance, with the manuscripts of the *Mālatīmādhava* utilized for his edition by the late Sir Ramakrishna Gopal BHANDARKAR.

Suppose there are six manuscripts A B C D E F, and their history is not clear so far as the lines of transmission are concerned; we cannot say that A B C form one family, descended from a common ancestor, while D E F form another. A comparison may, however, show that certain good readings are common to A B C, but are not found in D E F. This fact will indicate that, so far as those readings are concerned, some good manuscript was the source common to A B C, though that ancestry may be in other respects diverse or mixed. This method is intermediate between those based on the evidence derived from the known character of a single document and the genealogical evidence of a family of documents.

(By a methodical use of the evidence of extant and non-extant manuscripts (whose readings are inferred from the deriving extant manuscripts), we shall arrive at what may be called the *transmitted text*. This transmitted text will be different from any existing one. It will not be the best one, and not even necessarily a good one; but it will be the most ancient one according to the direct line of transmission, and the purest in the sense of being the freest from traceable errors of copying and unauthorised improvements.

In order to understand the method of reconstructing the lost archetype of a given number of extant manuscripts, let us consider a hypothetical case where we have nine extant manuscripts *a b c d e f g h i*. A close examination and comparison of their readings shows that they may be divided into two sets or families consisting respectively of *a b c d* and *e f g h i*. We may express this fact by saying that the first four are descended from a common non-extant ancestor *X* and the remaining five from another common lost ancestor *Y*. Now a further scrutiny may show that the family of five again falls into three smaller sets: *e*, *f i*, and *g h*. These smaller sets show that *e* stands apart; *f* and *i* are derived from a common ancestor *S*, *i* being merely a copy derived from *f*; and *g h* are derived from a lost parent codex *T*. In this typical discussion the lower case letters indicate extant manuscripts, while the capital letters indicate non-extant manuscripts. We shall suppose that the lines of transmission are not inter-

woven ; in other words the tradition is uniform and none of the manuscripts are conflated. That is to say, there is no evidence of mixture, either between the families descended from *X* and *Y* respectively or between the smaller sets within *Y*. The *stemma* will then stand as follows, *O* being the Original and *A* the lost archetype from which *X* and *Y* are derived :



If *O* and *A* can be demonstrated to be identical, then we can replace the symbol *A* by *O*.

Let us now examine the readings of all these extant manuscripts and compare them minutely. If we are satisfied that *i* is a direct copy of *f*, then we eliminate *i* altogether except in such readings where *f* has been damaged after the copy *i* was made from it.

We now come to the problem of reconstructing the readings of *A* on the evidence supplied by the readings of *a b c d e f g h* (and *i*, according to the proviso mentioned above).

(1) A reading which is shown by all the eight manuscripts (or nine if we include *i*) must have been that of *A*. This is the main postulate of textual criticism, namely, that a reading in which there is general agreement between what may be proved to be (more or less) independent manuscripts, must be the original reading of the archetype.

(2) If all the four descendants of *X* have one reading, and all the five of *Y* have another, then the genealogical evidence does not enable us to decide which was the reading of *A*. The *number*

of manuscripts arrayed on either side is immaterial, and so also the fact that there is a consensus between three smaller sets of *Y*. *One of the cardinal doctrines of textual criticism is that codices are to be weighed and not counted.* So mere numbers on either side do not help us in arriving at the correct reading of *A*. In this case there can be no absolute certainty as to the reading in *A*. Other things being equal, one of the two readings may be that of *A*, provided the documentary or transcriptional probability shows that the other reading can be a corruption of the one accepted. Thus for instance if *a b c d* represent Northern manuscripts having a reading *dhiṣṭhitā* and the five remaining manuscripts being Southern have a reading *viṣṭhitā*, we can see that *dhiṣṭhitā* may be the reading of *A* since *viṣṭhitā* is transcriptionally possible, because *dh* and *v* of early northern script are almost similar.

(3) Next let us suppose that the descendants of *X* (or of *Y*) are divided among themselves. The representatives of *T* (*g* and *h*) are found dissenting from those of *S* and *e*, and agreeing with *a b c d*. Is the reading of *Y* to be inferred from *T* or from *S* and *e*? It will be clear that it should be inferred from *T*, because, excluding the hypothesis of mixture or accidental coincidence, the agreement of *T* with *a b c d* can be explained only on the supposition that *T* has preserved the reading common to *X* and *Y*, which must also have been the reading of *A*. The readings of *S* and *e* in this case must be left aside as mislections or corruptions.

The advantage of the genealogical method, whenever it is possible, is twofold : (i) the work is simplified by the elimination of certain variants and (ii) it becomes possible to infer some readings of *A* besides those in which all its descendants agree.

We shall now consider briefly the typical cases of constitution of the texts of the different non-extant manuscripts whose existence at some time in the past must be assumed in order to explain the relationship in which the extant manuscripts stand to each other. In the *stemma* given above :

- (1) The text of *T* can be constituted
 - (a) through the agreement of *g* and *h*
 - (b) through the agreement of *g* or *h* and the remaining

manuscripts, because these agreements within the *Y* family can be explained only on the basis of the originality of these agreements descending from *Y* itself. The case of *T* agreeing with *a b c d* has already been dealt with. It follows from this that the special faults or corruptions or mislections of *g* and *h* cannot in general make the constitution of the text of *T* doubtful. The text of *T* will however remain doubtful when *g* and *h* do not either agree among themselves or with the remaining manuscripts, or when they are independent of each other in the same corruptions.

(2) In the same manner and with the same certainty or absence of certainty the text of *S* can be established on the basis of *f* and *T*.

(3) Similarly and to the same extent we can constitute the text of *Y* on the basis of *e*, *S* and *T*.

(4) The text of *X* can be established

(a) through the concordant readings of any two manuscripts *a b c d* taken at random, or

(b) through the agreement between any two manuscripts of this group with the manuscripts of the *Y* group, because such agreements can only be explained on the basis of their being the common readings of *X* and *Y* and therefore of *A*. If *a b c d* vary among themselves and differ from *Y*, giving conflicting readings, the text of *X* will remain doubtful. It follows from this that all particular readings of *a b c d e S* (*f*) *g* and *h* are in general worthless for the constitution of the texts of *X* and *Y*. They should therefore be eliminated.

The present consideration can be equally applied to such cases where the archetype *A* breaks up into a further number of streams of transmission in addition to *X* and *Y*, and the text

of *X* and *Y* can be constituted under the same principles of reconstruction.

(5) In the constitution of the archetype *A* the circumstances are somewhat different. If its transmission had broken into two streams *X* and *Y*, and *X* and *Y* agreed among themselves, then the concordant reading would be that of *A* as has already been explained in great detail above. If they conflict with each other one of these discordant readings can be that of *A*. But as mentioned above the genealogical method does not help us here. Other things being equal, both transcriptional (or documentary) probability and intrinsic probability will have to be taken into consideration for settling the text ; such considerations will form part of the next chapter.

(a) If of the two families *X* and *Y* only one manuscript each such as *a* and *i* were preserved, we could constitute the text of *A* with a similar certainty ; *a* and *i* would then be the variant bearers. But an essential deterioration would still remain, if in an already corrupt text in *X* and *Y* further damage were to arise in the line of transmission, or if in a bad reading of *X*, still retained pure in *Y*, a later corruption took place in *i*.

(b) A similar state of affairs would be met with if only *a e* and *i* were preserved. Through the agreement of *e i* against *a*, *a* and *Y* (i.e., *e i*) would become the variant bearers. If *a i* agree against *e* or *a e* against *i*, then the isolated readings are worthless. If *a i* and *e* all conflict with one another, then neither *Y* nor *A* can be constituted with the existing material. Attempts must then be made, from the 'sub-variants' of *e* and *i* to constitute the readings of *Y*, so that these variants may then be considered as having equal value with those of *a*, as seen from the point of view of recension.

(6) If only *a b*, or *e g*, or *g h* are preserved, then it will be possible only to constitute the text of the parent codices *X* or

Y or *T*, and for each of these lost sources the two extant manuscripts are the variant bearers.

(7) If *A* were divided into three (or more than three) lines of transmission such as *X*, *Y* and *K* (or more), the text of *A* can be constituted through the agreements between any two of these sub-archetypes. In such cases where these groups give conflicting readings, or when the agreements between any two are of such a nature as to be accidental and independent of each other, there can be no absolute certainty as to the reading of *A*.

The reasoning above is based on the assumption that there is no intermixing or fusion between the different strands of the transmission. Let us now consider cases where such contamination or conflation has taken place. If, for instance, the received manuscripts deviate from their sources and cross with these different sources, say, *XY* against *K*, *XK* against *Y* or *YK* against *X*, the isolated readings of *X* *Y* and *K* which, under normal circumstances would be considered worthless and eliminated, will all become 'presumptive variants' for the constitution of *A*, for *X* *Y* and *K* are all contaminated, and the agreement of any two conflicting with a reading of the third will give us a set of two variants having equal value for the constitution of the archetype.

A practical illustration of these principles applied to what are definitely known as conflated manuscripts is seen in the critical recension of the *Mahābhārata*. ¶The *stemma codicum* here divides the streams into *N* and *S*, *N* having separated again into two subgroups *ν* and *γ*. The critical examination has shown that even the relatively pure *K* versions are not free from contamination. The main principle underlying all speculation as to authenticity, says SUKTHANKAR, in his *Prolegomena*, is the postulated originality of agreement between what may be proved to be more or less independent versions. The rule arising out of the agreement between independent recensions and versions is easy to comprehend and simple to apply ; only its sphere of operation is rather restricted. Difficulties arise when there is fluctuation ; and that is the normal state. So when there was fluctuation the choice of the editor fell, as a corollary of the above rule, upon a reading which is documented by the largest number of (what *prima facie*

appear to be) more or less independent versions, and which is supported by intrinsic probability. The presumptions of originality in these cases is frequently confirmed by a lack of definite agreement between the discrepant versions. The chief difficulty comes in, when there is a double agreement, or agreement between two or more groups of each recension ; here one of the agreements, generally speaking, must be accidental, since both can hardly be original ; and either may be adopted, if they have equal intrinsic merit. The balance of probability is equal for such readings, and the choice difficult. Only in such cases can more weight be given to the witness which bears the best character for accuracy. Accordingly SUKTHANKAR has adopted the readings of the group Ś,K. When the two recensions have alternate readings neither of which can have come from the other and which have equal intrinsic merit (N : S), the choice is extremely difficult ; the balance of probability is equal for both recensions. Applying the doctrine that in such cases only more weight is to be given to the witness which bears the best character for accuracy, the more reliable witness may be consistently adopted, *as a stop-gap*, with a view to avoid unnecessary and indiscriminate fusion of versions. When these tests break down or when they give only a negative result, the expedient adopted by SUKTHANKAR was to find a reading which best explains how the other readings may have arisen. Thus 1.98.18 *samudge* > *samudre*, *samūhe*, *samṛddhe* etc. The true reading in such cases has often proved to be a *lectio difficilior*, or an archaism or a solecism, the desire to eliminate them being the cause of the variation.

Similarly the difficulty of restoring the texts of sub-archetypes of different versions when the extant manuscripts are contaminated may be realized from the following considerations gained from *Mahābhārata* manuscript studies. Says SUKTHANKAR : 'Suppose we examine six manuscripts of a version (Grantha) to prepare a critical text of that version. It may happen that four of them (G_{1,2,4,5}), which are conflated manuscripts, have a secondary reading, while only two (G_{3,6}) have the correct reading. In these circumstances the true character of the variants could never be inferred from the read-

ings of this version (G) itself ; it would be shown only by other versions (T or M or N). In fact, there is no way of finding out whether any of the manuscripts of a particular version are conflated (if they happen to be conflated) without consulting the other versions.⁶ Thus it is evident that the ideal type which we have discussed in this chapter needs modifications in actual practice according to the nature of the extant manuscripts with which we have to build up our critical recension.

The importance of discovering wherever possible the exact filiation of extant manuscripts may be gauged from the following consideration : supposing that a manuscript does not deviate from its source, and the tradition is pure or unmixed, it is not possible to settle its filiation to its source and other descendants of its source. If for instance in the *stemma* considered above *f* does not show any unique faults in its transcription from *S*, then we cannot decide whether *i* derives directly or through *f* from *S*. Suppose that only *i* and *f* are preserved, then *i* would be a presumptive variant bearer, whereas we should have to eliminate it completely if we penetrated sufficiently through the history of the textual transmission. It would therefore be necessary to subject to examination all its singular readings even if they be in reality genuine faults.

Similarly when a copyist corrects a fault in his source by a fortuitous conjecture without openly acknowledging it, then it may give rise to the appearance that his transcript descends from a source other than its own exemplar for such a reading ; in other words there is a possibility that some sort of contamination is assumed by the classifier of the manuscript evidence. But correct readings which are found through proper conjecture of the copyist cannot be brought within the field of criticism against their elimination demanded by other arguments. Hence great care is to be exercised in determining the filiation of manuscripts either within a single strand of tradition or within intertwined strands.

⁶ *Prolegomena*, p. LXXXI.

In the absence of exact chronology either of the authors or their transmitted texts, it is not possible to say whether the archetype recovered through critical analysis of the collations from extant manuscripts can be identified with the autograph or not. The archetype may be identical with the original or may be later than the original. If the archetype is later than the original, it may be an immediate copy of the autograph or the earliest intermediate copy which can be recovered through the evidence of extant manuscripts. It is not always possible to say how many stages of transmission lie between the different streams of the tradition or between the lost parent codex and the preserved manuscripts.

APPENDIX I

A GLOSSARY OF SOME IMPORTANT TERMS USED IN TEXTUAL CRITICISM

Accidental what is not consciously or intentionally done, that which is entirely due to chance ; applied especially to additions, errors and omissions when they are not deliberate.

Adscript an insertion of interlinear or marginal gloss or note within the text.

Amanuensis a clerk who writes from dictation.

Amorphous shapeless, anomalous, unorganized, applied to a text which is not fixed ; such a text is also called a *fluid* text. In general it refers to such popular texts like the epics and the *purāṇas* which exist already in different versions at different places before being reduced to writing.

Amplification enlarging or adding details ; particularly with reference to the additional passages and interpolations found in transmitted texts.

Anagrammatism transposition of letters, forming words with the letters of another.

Antonym a word which is the opposite of another.

Apapāṭha a wrong reading, a faulty reading.

Apparatus criticus the critical material collated from the manuscripts of a 'transmitted text' on the evidence of which the critical recension is arrived at. This is generally presented in a well ordered manner under the constituted text or in a separate appendix.

Archetypus or **Archetype** original model or prototype, applied to the hypothetical common ancestor of a family or group of manuscripts. Ordinarily it is applied to any hypothetical common parent codex of any group of manuscripts or codices, irrespective of whether it is immediately derived from the autograph of the text before the breaking of its transmission into several strands or is only an intermediary hypothetical link in the transmission after the first division takes place in the transmission. But strictly speaking it is better to reserve this name for that common source of all extant manuscripts in which the first divergence took place with reference to its transmission. For intermediate links the term *Hyparchetypus* or *Sub-archetype* may be used.

Athetise, (n. athetisation) to cut out, drop out or consciously omit with a purpose; used especially when the text is conflated, and the portion under discussion is intrinsically not borne out.

Authenticity validity or genuineness of a passage as being original or not. **Authenticate** to establish the truth or validity or genuineness of a reading, used especially when the critical recension amounts to the printing of the best and the most trustworthy manuscript correcting the obvious and inevitable scribal errors.

Autograph the original copy of a text as written by the author himself, or its revision by the author in his own hand.

Codex a manuscript volume; plural **codices**.

Codices deteriores manuscripts which are very untrustworthy but occasionally containing a correct or original reading, and whose evidence therefore is not worth collating throughout.

Codices impressi typis printed volumes.

Codices recentiores recent copies of manuscripts, of little value.

Codices scripti written volumes.

Conjecture the application of human ingenuity in arriving at a reading in the text by a process of common sense guess by going beyond the evidence of the manuscripts. Such a correct reading is called *a conjectural emendation*.

Collation the collection of all the significant evidence in a manuscript which may be of use towards determining what stood in its source or sources.

Colophon the tail piece of a manuscript or a section thereof, recording the ending of a section, part or the whole work itself.

Composite Version a version which is not derived from a single recension or subrecension, but partaking the characteristics of more than one, or in other words, mixing two or more than two subrecensions or recensions.

Conflate to Mix, blend, intertwine, or cross the different lines of transmission of a text by a comparison of manuscripts belonging to independent lines of transmission. Conflate readings are those which have been arrived at by the above process of 'crossing.'

Conflation the process of 'crossing' or blending; see above.

Constitutio textus the constitution of the text to the earliest form possible, i.e., that of the Archetypus, on the evidence of extant manuscripts. It is called the 'transmitted text.'

Constituted Text the text of the archetype, 'transmitted text.'

Contamination blending or crossing of two independent versions, subrecensions or recensions or of two manuscripts belonging to different versions or recensions.

Corrector the person who goes over a transcript and corrects the scribal errors by comparison with its exemplar. He may be the scribe himself oftentimes. Synonym : *Reviser*.

Corruption spoiling by mistakes, defacement, deterioration, debased or erroneous form of a word or passage in a text.

Critical Recension restoration of a text, so far as possible, to its original form, if by 'original form' we understand the form intended by its author.

Critique a set piece of criticism, pointing out of a fault, judgment, inquiring into.

Crux literally, a cross ; hence a desperate reading, often shown with a dagger or cross in printed editions, whence the name. Plural *cruces*.

Damnum damage, injury, loss ; cf. *defectio*, *omissio*.

Defectio defection, loss, disappearance. Cf. *damnum*, *omissio*. Applied for lacunae caused by defacement of text.

Diaskeuesis revision (of a literary work), recension.

Differentia diversity of readings, discrepant readings, characterizing the independence of versions or manuscripts. Another word would be *discrepentia*.

Diorthōtēs a corrector or reviser.

Dittography accidental writing twice over of a letter, word or phrase.

Divinatio divination, conjecture, prophetic inspiration, correct anticipation on insufficient evidence.

Documental Probability the probability that one set of words can be derived from another graphically, by the resemblance between the individual syllables of one and of the other.

Eclectic taking everything into account, choosing from various sources.

Eclectic fusion a fusion between various sources.

✓ Editio princeps the first or foremost edition. Pl. *editiones principes*.

✓ Eliminatio codicum descriptorum the elimination of manuscripts which have no independent value, such as transcripts of an extant codex.

Eliminatio lectionum singularium the elimination of singular or peculiar readings (of a single manuscript or group of manuscripts whose evidence is not trustworthy).

Eliminatio elimination, throwing out of consideration, not taking into account for the purpose in hand.

Elision omission in pronunciation.

Emendatio emendation, the third stage in Classical Philology of textual criticism whereby the 'transmitted text' is restored as far as possible to the original form as it was written by its author.

Examinatio examination, the continuous study of the manuscript before arriving at a judgment regarding its trustworthiness and noticing its peculiarities.

Exegesis interpretation of the material presented by the evidence of the manuscripts without getting behind such evidence by Emendatio.

Exemplar a codex which forms a 'copy' for further transcription, a model or original source from which transcripts are directly made. Cf. Sk. *ādarśapustakam*.

Extant existing, surviving, applied to codex, manuscript, etc.

Extrinsic Probability external probability, unconnected with contextual or intrinsic probability but referring to conditions external to the sense of the passage. Cf. documental probability.

Fluid cf. Amorphous.

Genealogical Method the method by means of which the manuscripts allow themselves to be filiated to one another leading to a pedigree showing the descent of various manuscripts from common sources and the relations between them.

Gloss word inserted in margin or between the lines to explain word in text.

Gnōme thought, judgment, opinion ; maxim, aphorism.

Graphical probability cf. documental probability.

Hand person who transcribes by hand manuscripts or corrects them after comparing them with their exemplars or other copies of the texts represented therein.

Hapax legomenon word for which only one use is recorded.

Haplography omission of words or syllables with the same beginning or ending.

Hermēneia interpretation.

Hermeneutic Exegetical, interpretative.

Heuristics assembling of the material (manuscripts, testimonia, etc.) and fixing their interrelationship.

Hiatus break between two vowels which do not coalesce.

Higher Criticism the fourth aspect of textual criticism in Classical Philology, the separation of the sources utilized by the author.

Homoeoarcta loss of lines between two lines which begin similarly.

Homoeographon loss of letters, syllables, words, phrases or lines through similarity of writing.

Homocoteleuta loss of lines between two lines which end similarly.

Homonym word of same form as another but different sense ; name-sake.

Hyparchetypus sub-archetype, or the hypothetical source of extant manuscripts lower down in the transmission of the text than the archetype. It represents the second divergence in the line of tradition, the first starting with the archetype itself.

Hypermetric of verse(s) having redundant syllable(s).

Hypothetical common ancestor a manuscript which is no longer in existence but whose existence at some time in the past must be assumed in order to explain the relation in which the extant manuscripts stand to each other. It is considered as the source of all such manuscripts.

Illuminate the method employed to decorate a manuscript with various designs ; decorate (initial letters, etc.) a manuscript with gold, colour etc.

infra lineam *below* the line ; abr. *inf. lin.*

Incunabula books printed early, especially before 1500.

Inorganic extraneous, not forming a part of, out of context.

inter lineas *between* the lines ; abr. *int. lin.*

Interpolation insertion of words, passages etc. within a text.
Literally, polishing, improvement by polishing.

Interpretation exegesis, making out meaning of words, explanation.

Intrinsic probability the probability depending upon the context, inherent or essential probability.

Itacism excessive use of the letter *i*.

Kátharsis cleansing, purging, catharsis.

Lacuna gap in a manuscript where some part has been lost or obliterated. Plural *lacunae*.

Lapsus calami slip of the pen.

Lectio difficilior a hard reading, the more difficult of two readings.

Lectio facilior a simple or easy reading, the simpler or easier of two readings.

Lectio singular a singular or individual reading.

Lectio vulgata a vulgar reading, a common reading.

Lemma citation by the commentator of a word beginning a verse or sentence in the text. Pl. *lemmata*.

Léxis word, expression.

Lineal ascendant when a manuscript is directly copied from another or through any number of intermediate copies, that copy will be the lineal ascendant of the manuscript.

Lineal descendant in opposition to the above, the manuscript is designated a lineal descendant of that copy.

Lipography simple omission of any kind. Cf. *parablepsia*.

Lower Criticism German *Niedere Textkritik* or French *critique verbale*, as opposed to Higher Criticism, comprises Heuristics, Recensio and Emendatio.

Manuscript(s) handwritten copy (copies) of any text, abr. Ms(s).

Marginalia marginal notes found in most manuscripts.

Misch-codex a conflated manuscript, where the different streams of independent tradition are intermingled.

Mislection wrong reading.

Non-extant not existing or surviving, lost. Applied to codices.

Obleize to mark with an obelus or obelisk, which was used in ancient Mss. to indicate that the word in the language is spurious.

Omission leaving out. Cf. *damnum, defectio*.

Original what is intended by the author.

Parablepsia cf. *Lipography*.

Paradiothōseis emendation made by the scribe.

Parádosis the traditional text.

Pāṭha reading, variant reading.

Pāṭhāntara variant reading.

Pedigree (of manuscripts) showing the interrelationship between the various extant manuscripts in the form of a family tree or *stemma codicum*.

Pothī a manuscript volume consisting of loose folios.

Prakṣepa Interpolation.

Praksipta interpolated.

Prāśasti dedicatory verses found at the beginning of texts or portions or divisions of texts.

Presumptive variants are isolated readings found in conflated manuscripts which, under normal conditions, would have been eliminated for the *constitutio textus*, but have now the value of independent readings in the absence of positive evidence that they are corrupt, and thus the right to be considered as variants.

Probability cf. under **Documental** (or **Documentary**), **Extrinsic**, **Graphical**, **Intrinsic** and **Transcriptional**.

Probatione(s) penna(e) something written on the margin of the manuscript folio for trying the pen or quill.

Propria manu in one's own hand; in the hand of the original scribe abr. *pr. m.*

Received Text the text as it has come down in its normalized form, often called the **Vulgate**. cf. **Textus receptus**.

Recensio restoration of the text to that of the archetype; critical examination.

✓ **Recension** in the combination 'critical recension' it applies to the constituted text or the text of the author as far as that is possible. Ordinarily it applies to the first line of division of the transmission from the archetype, and it should be so limited in its usage. The secondary cleavage of the Recension gives us the sub-recension, and of this again the Version and further the sub-version.

Reclamante(s) catch word(s) or expression(s) generally used to indicate the connection between the quires of a codex, i.e. the first word of a new quire is repeated below the last line of the preceding quire.

Recognitio recognition, notice.

Recto right hand page of open book. Cf. **verso**.

Redaction editing, putting into literary form.

Redactor editor.

Rhapsodist person who writes a piece of epic verse of length for one recitation.

Roll a document in the form of a cylinder obtained by turning the paper over and over on itself without folding.

Rotograph white on black print by a special process of a page or pages of a manuscript.

Scholium ancient grammarian's marginal note on passage or word in classical author, and by extension a commentary. Plural *scholia*.

Scriptal fixation the reduction to written form of text existing before in oral tradition only.

Scriptura continua continuous writing without division between words or phrases or sentences.

Secondary applied to what is not 'original' or intended by the author and yet finds place in the various stages of the textual transmission ; secondary relationship between two Mss. or versions is defined as common descent from a source or sources lower down in the transmission than the archetype.

Secunda manu in second hand or in the hand of a person other than the original scribe ; abr. *sec. m.*

Selectio selection after due consideration, applied to readings presented by extant manuscripts.

Signum the abbreviated sign, usually a letter of the alphabet or a numeral or a combination of both, by which a manuscript is designated in the notes of the critical apparatus.—Plural **sigla**.

Sodhapatra an extra leaf in the manuscript containing additional passages, either unintentionally left out of the initial transcript or found in other Mss. and added to his own text by a scribe, editor or owner.

Solecism flagrant offence against grammar, idiom or etiquette.

Stemma(ta) codicum pedigree(s) of manuscripts, shown in the form of a family tree.

Stichometry the measuring of lines to a page and letters to a line in a given codex.

Sub-recension when a Recension further diverges into different lines of transmission which are themselves the further sources of divergence, these sources are termed sub-recensions.

Sub-variant variant recorded in the sub-recension or version which, under normal circumstances, would be eliminated for the constitution of the text of the archetype, but would be essential for the constitution of the text of the recension.

Superscript something inscribed over another.

supra lineam above the line ; abr. *sup. lin.*

Synonym word identical and coextensive in sense and usage with another of the same language.

Testimonium evidence of a partial nature, other than the direct documentary evidence, found in quotations, commentaries, translations, adaptations, resums, parodies, etc. for settling the condition of the transmitted text.—Plural **testimonia**.

Textual Dynamics an expression coined by SUKTHANKAR and applied to the laws governing the manipulation of a text which has not become fixed at any period of its transmission but has grown from strength to strength ; or in other words to the textual criticism of a *fluid* text represented by a *fluctuating* tradition. Cf. Bbh. Ādi. *Prolegomena* p. CII.

Textual Statics textual criticism as applied to a text which was fixed and rigid at the time of its transmission, and to which the classical mode of approach through Heuristics, Recensio, Emendatio and Higher Criticism can be applied.

Textus ornator an ornate text, applied to that recension or version or codex where the fuller text of a work is preserved.

Textus simplicior a simple text applied to that recension or version or codex where the shorter text of a work is preserved.

Textus receptus the received text, the normalized text or more commonly the 'Vulgate.'

Traditio tradition, the history of textual transmission.

Traditional reading a reading which is supported both by the manuscripts and the testimonia. Cf. **Transmitted reading**.

Transcript a copy made (by hand) from an exemplar.

Transcriptional probability cf. documental probability.

Transmission the preservation of a text through a long line of copies made from the original or intermediary copies, all of which go back ultimately to a single source. Haphazard transmission indicates a transmission where no 'protection' is afforded to the text and therefore the chances of corruption, crossing and inflation are considerable. Protected transmission indicates favourable conditions for the proper preservation of the text, and the copying is done under recognized bodies, supervising the work of the scribes.

Transmitted reading a reading supported by the manuscripts alone.

Transmitted text the text of the archetype.

Unoriginal what is not intended by the author, and therefore not belonging originally to the text.

Ur used as an affix and added to titles of works like *Ur-Mbh.* *Ur-Iliad*, etc.

Ur-text the autograph or original text.

Varia(e) lectione(s) variant reading(s) or variant(s).

Variant one of the several readings which can be that of the text we are constituting.

Variant bearer any codex whose readings may be considered for the constitution of the text under consideration.

Version the further line of divergence from the sub-recension or when there is no sub-recension, from the recension itself.

Verso left-hand page of open book or back of Recto. Cf. Sk. *prsthāṃ* as opposed to *āṅkaḥ*.

Vulgate the received or normalized text of any work. Originally applied to the Latin version of the Bible prepared by Jerome late in the fourth century A.D. ; and by transference applied to the popular or commonly known and accepted form of a text, as opposed to the critical text or edition (Latin *vulgata*).

APPENDIX II

A Brief Note on the History and Progress of Cataloguing of Sanskrit and other MSS. in India and Outside (Between A.D. 1800 and 1941).

BUT for the high regard entertained by our ancestors for manuscripts since the art of writing came into vogue the transmission of the wide variety of thought that now permeates our life and culture would have been an impossibility. The oral communication of texts from generation to generation as in the case of the *R̥gveda* must have been materially facilitated by the earliest attempt to put this *magnum opus* of our R̥sis in written characters, whether on the *bhūrja-patra*, the *tāla-patra* (palm-leaves) or any other medium then available to our forefathers. The history of the writing¹ of manuscripts in India before the Christian era is difficult to reconstruct but not so in the case of the writing of Manuscripts after the Christian era² as some MSS. of this latter period belonging to the early centuries of the Christian era are available for such study. Apart from these MSS. on *Bhūrja* etc., recently a MS.,³ consisting of 20 leaves of gold

¹ MAX MÜLLER in his *History of Ancient Sanskrit Literature* (1859) devotes no less than 27 pages to the question of "Introduction of Writing" (pp. 257 to 270 of Panini Office reprint of Max MÜLLER's *History*). Dr. BÜHLER, who 40 years later published his work on *Indian Palaeography*, is thanked by MAX MÜLLER in the Preface for the index at the end of his *History*. Dr. BÜHLER is mentioned here as "a pupil of Professor BENFEY". In the monthly magazine "*The Dawn*" (Calcutta, January 1901) Sir Jadunāth SARKAR (then Professor of English, Patna College) has given a summary of BÜHLER's *Indian Palaeography* which gives the history of Indian alphabets from 350 B.C. to 1300 A.D.

² See pp. 2-3 *supra* and App. III below.

³ Vide p. 179 of Report of *Arch. Sur. of India* (1926-27). While this gold MS. was being prepared the Chinese were using paper for their MSS. (Vide pp. 71-76 of the *Journal of the American Oriental Society*, Vol. 61, No. 2, June 1941—A. W. HUMMEL's paper on

with writing incised on one side of each leaf has been discovered in Burma during excavations at Hmawza by Mons. Charles DUROISSELLE. This MS. is $6\frac{1}{2}$ " in length and about $1\frac{1}{4}$ " in breadth and contains short extracts from the *Abhidhamma* and *Vinaya Piṭakas*. From the palæographical point of view it is regarded as the most instructive find yet made in Burma. The characters of this MS. are similar to those of the inscriptions incised round the lower and upper rims of a large silver *stūpa* found at the place and of the same date *viz.* 6th or beginning of the 7th century A.D.

These rare finds indicate the importance attached by the ancients to MSS. and the sanctity with which they were cared for and preserved by them in spite of the political vicissitudes of the changing periods of history. In spite of all this care and sanctity and in spite of the wealth of MSS. preserved in India and Greater India their neglect if not destruction was the order of the day during the early period of the British advent⁴ in India owing to several factors, which need not be discussed here.

"The Development of the Book in China" in which we find the Story of the Chinese book as it developed step by step from the *wooden* or *bamboo slip* to the *silk* or *paper* scroll, from the scroll to the folded album and from the album to the paged book of modern times.) We note here the early chronology of this story from HUMMEL's very learned and instructive paper :—

B. C. 13th and 14th Centuries—incised divination bones with inscriptions discovered in 1899 in Honan province show that books existed at this time (Shang dynasty). The pictograph for a 'volume' appears on these bones and on early bronzes.

1st Century B. C.—Thousands of inscribed slips found in the desert sands of Chinese Turkestan.

A. D. 96—Seventy-eight wooden slips containing an inventory of weapons, discovered by Folke BERGMANN of Sven HEDIN's Expedition (about 10 years ago) in Central Asia.

A. D. 103—*Ts'ai Lun*, the *inventor of paper* offered his product to the throne. *Ts'ui Yüan* a scholar who died 37 years after paper was first made wrote to a friend as follows :—"I send you the works of the Philosopher *Hsü* in ten scrolls—unable to afford a copy on silk, I am obliged to send you one on paper".

⁴ Edward MOOR in his *Narrative of Operations* etc. against Tipoo Sultan (London, 1794) makes some remarks about Canarese docu-

We owe much to the European scholars in the matter of critical study of our MSS. and the early history of Indology is closely connected with their lives and labours. The work of Sir William JONES, MAX MÜLLER, COLEBROOKE and a host of other scholars has laid the foundations of critical scholarship² in the field of

ments :—" On public or important matters the Canarese, we believe, write on common paper, but their ordinary accounts and writings are done with a white pencil on black paper, or rather a cloth which is prepared something like our slate paper and the pencil is a fossil, very similar to French Chalk". MOOR obtained specimens of these documents from a waggon load of them kept in a pagoda at Doridrug but they were obviously account books.

Saint Rāmadāsa of Mahārāṣṭra (seventeenth century) has got a special chapter in his *magnum opus* the *Dāsabodha* called the *lekhananirūpaṇa* which contains detailed instructions re. the writing of MSS. in Devanāgarī characters and their preservation. We propose to give an English rendering of it on a future occasion for the benefit of the students of Indian palæography.

² The critical scholarship in the field of research in Indology is necessarily connected with the idea of collecting MSS. and printing their lists or catalogues. The origin and development of this idea is admirably dealt with by Dr. S. K. BELVALKAR in his Foreword to Vol. I of the *Descriptive Catalogue of the Govt. MSS. Library* (now with the B. O. R. Institute, Poona), Bombay, 1916. We note here the early chronology of this origin and development :—

c. A. D. 1774 to 1779—Sir Robert CHAMBERS, a friend of Sir William JONES and BURKE and sometime President of the Asiatic Society of Bengal, collected a library of Indian books (Vide "*Vorrede*" to WEBER's Catalogue of Berlin MSS. 1853). The unique collection of Sanskrit MSS. was later purchased by the Prussian Government in 1842 and deposited in the Imperial Library of Berlin.

1789—Sir William JONES published his English Translation of *Śākuntala*.

1782—Col. MACKENZIE landed in India as cadet of Engineers on the Madras Establishment.

1796-1806—MACKENZIE was employed in the investigation of the Geography of the Deccan. He later became Surveyor General of India. He collected MSS., inscriptions, plans, maps, and other antiquarian material. His collection was purchased by the East India Company for £10,000.

1828—Catalogue of Mackenzie Collections by H. H. WILSON, published,

Indology in general and of Sanskrit learning in particular. The history of this Critical Scholarship is now too well-known to every Indologist to be repeated in this short note, which will be confined to the history of Cataloguing⁶ of MSS. in India. We may, however, record here a fact not so well known to Indian Sanskritists that the first European to evince interest in Sanskrit was a German Jesuit, who is referred to by Bernier in his *Travels*⁷

1868 (10th May)—Pandit RADHAKRISHNA, the chief Pandit of the Lahore Durbar addresses a letter to the Viceroy and Governor-General of India, in which he compliments the Government of India on the orders they had issued “for collecting the Catalogues of Sanskrit, Arabic and Persian books in existence in many parts of India” and urges the necessity of compiling a Catalogue “of all Sanskrit MSS. in India and Europe”.

⁶ Vide “*Papers relating to the Collection and Preservation of the Records of ancient Sanskrit Literature of India*” by A. E. GOUGH, Calcutta, 1878.—Mr. STOKES, the Secretary of the Legislative Council drew up a scheme for collecting and cataloguing MSS. This scheme was approved by the Government of India in their order No. 4338-48 dated Simla, 3rd November 1868. The Government of Bombay acting under the orders of Government of India on 10th December 1868 requested Dr. KIELHORN and Dr. BÜHLER to undertake the search of MSS. in the Bombay Presidency. The Bombay Government had, however, already taken the initiative in this matter by keeping some money at the disposal of Dr. BÜHLER on 1st November 1866 for the purchase of MSS. The MSS. collected by Dr. BÜHLER with the help of this money now form the 1866-68 collection of the Government MSS. Library at the B. O. R. Institute. For further history of this search for MSS. vide Dr. BELVALKAR’S Foreword referred to already (paras 7 ff.).

⁷ Constable’s Edn. London, 1891, p. 329—Bernier observes :—“I was acquainted with Rev. Father Roa a Jesuit, a German by birth and Missionary at Agra who had made great proficiency in the study of Sanscrit”. His full name was Father Heinrich ROTH, S.J. He was attached to the Goa Mission. He journeyed from Goa to Agra about A.D. 1650-1660, and studied Sanskrit during these years. Roth went back to Rome from Agra about A.D. 1665. He drew up for Father KIRCHER five engraved plates published by KIRCHER in his *China Illustrata* referred to by Bernier (on p. 332). The first four plates contain the alphabet and elements (in *Devanāgarī* characters) of Sanskrit explained in Latin; the 5th plate is Our Lord’s Prayer and an Ave Maria in Sanskrit and Latin to serve as an exercise for beginners.

in a letter dated 4th October 1667 and whose full name was Father Heinrich ROTH. This scholar drew up "the first specimens of Sanskrit ever printed or engraved (as for a book) in Europe or indeed anywhere". These specimens will be found between folios 162 and 163 of *China Illustrata*⁸ of Athanasius KIRCHER,⁹ S.J., published at Amsterdam by Janszon in A.D. 1667. Though the first specimens of Sanskrit were put in print as early as A.D. 1667 the first published Catalogue of Sanskrit MSS. appeared in A.D. 1807¹⁰ i.e. 240 years after the appearance of KIRCHER's *China Illustrata*. The progress of Cataloguing of Sanskrit and other MSS. in India and outside since A.D. 1807 will be apparent from the following table based on the list of Catalogues appended to the present note :—

A. D.	Author or Compiler	Place of Deposit	Place of Publication of Catalogue
1807	Editor of Sir William Jones' Works	London	London
1828	H. H. WILSON		Calcutta
1838	..	Fort St. William	Calcutta
1846	Otto BÖHTLINGK		St. Petersburg
1853	A. WEBER	Berlin	Berlin
1857	William TAYLOR	Fort St. George	Madras
1859	Fitzedward HALL		Calcutta
1861	T. S. Condaswami IYER	Fort St. George	Madras

⁸ Vide p. 332 of Bernier's *Travels*, foot-notes 1-3.

⁹ Ibid., KIRCHER (born 1602 and died at Rome 1680 A.D.) was one time Professor of Oriental Languages at Würzburg.—For other curious engravings after Indian drawings, vide pp. 156-162 of *China Illustrata*.—AUFRECHT in his *Catalogus Catalogorum* refers to the MSS. in the possession of Prof. Julius JOLLY at Würzburg and at the Würzburg University (Vide C. C. III, p. IV).

¹⁰ Vide pp. 401-415 of Vol. XIII *Sir William Jones' Works*, London, 1807, where a *Catalogue of Sanskrit and other Oriental MSS.* presented by Sir William and Lady JONES has been printed.

<i>A. D.</i>	<i>Author or Compiler</i>	<i>Place of Deposit</i>	<i>Place of Publication of Catalogue</i>
1864	T. S. Condaswami IYER	Benares	Benares
1864	Theodore AUFRECHT	Oxford	Oxford
1865	R. ROTH	Tübingen	Tübingen
1868	R. LAWRENCE Hand-written list)	Khatmandoo	
1869	F. KIELHORN		
		Bombay Presidency Southern Division	Bombay
1869	Th. AUFRECHT	Cambridge	
1870	James D'ALWIS	Ceylon	..
1870	A. C. BURNELL	..	London
1871	G. BÜHLER	Gujarat, Kathiawar, Kachch, Sindh, Khandesh	..
		..	
1871	Rajendralal MITRA	..	Calcutta
1872	G. BÜHLER	Gujarat	Surat
1874	F. KIELHORN	Central Provinces	Nagpur
		North	
1874	..	Western Provinces	Benares
		..	
1874	G. BÜHLER (1872-73)	Oudh	Bombay
1875	J. S. NESFIELD		
1875	G. BÜHLER (1874-75)	..	Girgaum, Bombay
1876	Georg ORTERER		
		Dr. Martin Haug's Collections at München	München
		..	
1876	E. B. COWELL and J. EGGELING	London	London
1876	..	Calcutta	Bonnæ
1877	Rajendralal MITRA	N. W.	Calcutta
1877-1886	..	Provinces	..

<i>A. D.</i>	<i>Author or Compiler</i>	<i>Place of Deposit</i>	<i>Place of Publication of Catalogue</i>
1877	G. BÜHLER	Kashmir, Rajputana, Central India	Bombay
1878	Pandit Devī PRASAD	Oudh	Allahabad
1878	J. NESFIELD and Devī PRASAD	Oudh	Calcutta
1878	A. E. GOUGH	Papers relating to Sanskrit Literature and its cataloguing etc.	Calcutta
1879	Pt. Devī PRASĀD	Oudh	Allahabad
1879	Pandit KASHĪNATH KUNTE	(1879-80)	Lahore
1880-81	Pandit KASHĪNATH KUNTE	(1880-81)	Lahore
1880	A. C. BURNELL	Tanjore	London
1880	Rajendralal MITRA	Bikaner	Calcutta
1880	R. G. BHANDARKAR	..	Bombay
1880-85	Gustav OPPERT	Southern India	Madras
1881-1890	Pandit Devī PRASĀD	Oudh	..
1881	F. KIELHORN	Bombay Presidency	Bombay
1881	F. KIELHORN (1877-81)	..	Poona
1881	A. Csoma de KÖROS and M. Lèon FEER	..	Paris
1882	G. BÜHLER	Wien	Wien
1882	Pt. Kashinath KUNTE	Gujranwala, Delhi and Punjab	Lahore London
1882	H. OLDENBERG	London	
1882	Rajendralal MITRA	Nepal	Calcutta
1882	R. G. BHANDARKAR (1881-82)	..	Bombay

<i>A. D.</i>	<i>Author or Compiler</i>	<i>Place of Deposit</i>	<i>Place of Publication of Catalogue</i>
1882	Bhau Daji Collection	Bombay	Bombay
1883	B. NANJIO	Chinese	} Oxford
		Trans. of Buddhist	
		Tripitaka—Catalogue	
1883	Cecil BENDALL	Cambridge	Cambridge
1883	P. PETERSON	Bombay	} Bombay
	(1882-83)	Circle	
1884	Lewis RICE	Mysore & Coorg	} Bangalore
1884	E. KIELHORN and R. G. BHANDARKAR (Viśrambag Collections)	Poona	Poona
1884	P. PETERSON	Bombay Circle	} Bombay
1884	R. G. BHANDARKAR	Bombay Presidency	} Bombay
1886	A. WEBER (Vol. II)	Berlin	Berlin
1887	P. PETERSON	Bombay Circle	} Bombay
1887	R. G. BHANDARKAR	Bombay Presidency	} Bombay
1887-1904	EGGELING (India Office MSS.)	London	London
1888	S. R. BHANDARKAR	Poona	Bombay
1890-1893	Pt. Devī PRASAD	Oudh Province	} Allahabad
1892	P. PETERSON	Ulwar	Bombay
1892	Theodor AUFRECHT	Florence	Leipzig
1892	..	Berlin	Berlin
1892	Hṛṣikeśa SHASTRY	Calcutta	Calcutta
1893	(Govt. Ori. MSS. Library)	} Madras	} Madras
1893	R. G. BHANDARKAR	Bombay Presidency	} Bombay
1893	A. F. R. HOERNLE	Central Asia	Calcutta
1894	M. A. STEIN	Jammu	Bombay

<i>A. D.</i>	<i>Author or Compiler</i>	<i>Place of Deposit</i>	<i>Place of Publication of Catalogue</i>
1894	P. PETERSON	Bombay Circle	} Bombay
1894	R. G. BHANDARKAR	Bombay Presidency	
1895	P. PETERSON	Bombay Circle	} Bombay
1895	Hara Prasad SASTRI	Bengal	
1895-1902	Hṛṣikeśa SHASTRY and Siva Candra GUI	} Calcutta	Calcutta
1895	E. HULTZSCH		Southern India
1896-1899	P. PETERSON	Bombay Circle	} Bombay
1897	R. G. BHANDARKAR	Bombay Presidency	
1898	Hara Prasad SHASTRI	Bengal	} Calcutta
1898	G. BÜHLER	Tübingen	
1898-99	(Sanskrit & Tamil MSS)	South India	} Madras
1899	Richard GARBE	Tübingen	
1899	P. PETERSON	Bombay Circle	} Bombay
1899-1901	Pt. Kuñja Vihārī NYĀYABHŪṢANA	Calcutta	
1900	Rajendralal MITRA	Bengal	Calcutta
1900	P. CORDIER (Hand-list)	Bengal	..
1900	Haraprasad SHASTRI	Report for 1895-1900	} ..
1901	Th. AUFRECHT	Leipzig	
1901-1939	S. Kuppuswami SHASTRI and others (Vols. I to XXVII)	} Madras	} Madras
1901	A. V. KATHAWATE		
1901	A. CALEATON	Paris	..
1902	Whish Collection	(South India)	} London
		London	
1902	Jain Śvetāmbara Conference	(Jaina MSS. in India)	} Bombay

<i>A. D.</i>	<i>Author or Compiler</i>	<i>Place of Deposit</i>	<i>Place of Publication of Catalogue</i>
1902	M. de Z. WICKREMA-SINGHE	} London	London
1902	Cecil BENDALL		London
1904	Rajendralal MITRA	Bengal	Calcutta
1905	M. WINTERNITZ and A. B. KEITH	} Oxford	Oxford
1905	Hara Prasad SHASTRI and C. BENDALL		Calcutta
1906	Hara Prasad SHASTRI	..	Calcutta
1907	Rajendralal MITRA	Bengal	Calcutta
1907	A. CALEATON	Paris	Paris
1907	S. R. BHANDARKAR	Rajputana and Central India	} Bombay
1908	(Jain MSS.)	Calcutta	
1908	Satiscandra VIDYĀBHÜ-ŚAṆA	Buddhist Works	} Calcutta
1908	S. VIDYĀBHÜŚAṆA.	Tibet	
1909	Th. AUFRECHT	München	München
1909	P. CORDIER	Paris	Paris
1912	M. A. STEIN	Oxford	London
1912	A. CALEATON	Paris	Paris
1913-1939	S. Kuppuswami SASTRI and others.	Madras	Madras
1915	P. CORDIER	Paris	Paris
1916	A. F. R. HOERNLE	East Turkestan	} Oxford
1916	Professors of Sanskrit, Deccan College, Poona.	} Poona	
1917	Hara Prasad SASTRI	Calcutta	Calcutta
1918	N. D. MIRONOFF	Petrograd	Petrograd
1919	Suparsva Das GUPTA	Arrah	Arrah
1919	Govt. Sanskrit Library (1897-1919)	} Benares	Benares
1920	Telugu Academy		Cocanada
1921	R. A. SASTRI (Kavīdra-cārya List)	..	Baroda
1922	Govt. Oriental Library	Mysore	Mysore
1923	Gopinath KAVIRAJ	Benares	Benares

<i>A. D.</i>	<i>Author or Compiler</i>	<i>Place of Deposit</i>	<i>Place of Publication of Catalogue</i>
1923	C. D. DALAL and L. B. GANDHI	Jesalmere	Baroda
1923	Haraprasad SASTRI	Calcutta	Calcutta
1923	Haraprasad SASTRI (History & Geography)	Calcutta	Calcutta
1924	Jacques BACOT	Paris	Paris
1925-1930	H. D. VELANKAR	Bombay	Bombay
1925	G. K. SHRIGONDEKAR and K. S. Ramswami SASTRI	Baroda	Baroda
1925	Haraprasad SASTRI	Calcutta	Calcutta
1925	Haraprasad SASTRI	Calcutta	Calcutta
1925	B. O. R. Institute	Poona	Poona
1926	HIRALAL	Central Provinces and Berar	Nagpur
1926	Adyar Library	Adyar	Adyar
1927	K. P. JAYASWAL and Ananta Prasad SHASTRI	Mithila	Patna
1928	P. P. S. SASTRI	Tanjore	Tanjore
1928	Govt. Ori. Library	Mysore	Mysore
1928	Adyar Library	Adyar	Adyar
1929	(Marathi MSS.)	Tanjore	Tanjore
1929	K. Sambasiva SASTRI	Trivandrum	Trivandrum
1930	R. FICK	Göttingen	Berlin
1930	Hemacandra GOSWAMI	Assam	Calcutta
1930	T. R. Gambier PARRY	Oxford	London
1930-31	Otani Daigaku Library	Kyoto	Kyoto (Japan)
1931	Haraprasad SASTRI	Calcutta	Calcutta
1931	Marcelle LALOU	Paris	Paris
1932	Punjab University	Lahore	Lahore
1933-38	S. S. DEVA	Dhulia	Dhulia
1933	K. P. JAYASWAL	Mithila	Patna
1933	Sri Ailak Pannalal Digambar Jain Sarasvati Bhavan	Jhalrapatan	Jhalrapatan
1934	Jean FILLIOZAT	Paris	Paris

A. D.	Author or Compiler	Place of Deposit	Place of Publication of Catalogue
1935	Chintaharan CHAKRA- VARTI	Calcutta	Calcutta
1935	H. R. KAPADIA	Poona	Poona
1935	A. B. KEITH and F. W. THOMAS	London	Oxford
1936	Oriental MSS. Library		
1936	H. R. KAPADIA	Poona	Poona
1936	P. K. GODE	Poona	Poona
1937	M. A. SIMSAR	Philadelphia	Philadelphia
1937	P. K. GODE	Poona	Poona
1937	L. B. GANDHI and C. D. DALAL	Pattan	Baroda
1938	H. I. POLEMAN		
1938	S. K. BELVALKAR	United States and Canada	New Haven
1938	S. K. BELVALKAR	Poona	Poona
1939	H. D. SHARMA	Poona	Poona
1940	P. K. GODE	Poona	Poona
1940	H. R. KAPADIA	Poona	Poona

The above table shows at a glance the history and progress of Cataloguing of Sanskrit and other MSS. whether deposited in India or outside. This history covers a period of about 135 years from A.D. 1807 to 1941. The list of catalogues published along with this note is by no means exhaustive as detailed information regarding all the published catalogues of MSS. in any single source was not available. Secondly, these entries are based on actual examination of only some of these catalogues available at the B. O. R. Institute, Poona. Entries regarding catalogues not actually examined are taken from AUFRECHT's *Catalogus Catalogorum* (3 Parts) and from the *Provisional Fasciculus* of the *New Catalogus Catalogorum* published by the University of Madras in 1937. Though the present list of catalogues is necessarily tentative it is sufficient to acquaint the reader with the history and progress of Cataloguing of Indian MSS. carried out by European and Indian scholars. In spite of this progress which has brought home to the Indian scholars the importance of their

undying national wealth the work of publishing Descriptive Catalogues of MSS. has not received the attention it deserves. All research in Indology depends on these MSS. and the earlier we exploit these decaying sources of our history and culture the better for the enrichment of our literature and history. It is strongly to be hoped, therefore, that the present custodians of MSS. collections in India, whether Provincial Governments, rulers of Indian States, learned bodies or public libraries will concentrate their resources and attention on the Cataloguing of their MSS. in general and preparing their Descriptive Catalogues¹¹ in particular.

✓ CHRONOLOGICAL LIST OF CATALOGUES

1807

Catalogue of Sanscrit and Other Oriental Manuscripts presented to the Royal Society by Sir William and Lady JONES, (Pages 401-415 of Vol. XIII of *Sir William Jones' Works*, London, 1807).

1828

Descriptive Catalogue of the Oriental Manuscripts collected by the late Lieut.-Col. Colin Mackenzie, by H. H. WILSON, Calcutta, 1828.

1838

Sūcipustaka (a list of MSS of Fort William, the Asiatic Society in Calcutta, etc.), Calcutta, 1838

1846

Verzeichniss der auf Indien bezuglichen Handschriften und Holzdrucke im Asiatischen Museum, von Otto BÖHTLICK, (Printed in *Das Asiatische Museum an St. Petersburg von Dr. Bernh DORN*) St. Petersburg, 1846.

¹¹ Vide pp. 73-81 of *Festschrift Prof. P. V. Kane* (1941) where Prof. Chintaharan CHAKRAVARTI of Calcutta writes on the "Study of Manuscripts" and makes a fervent appeal to Government to start a MSS. Department like the Epigraphic Department for the proper care and scientific cataloguing of MSS. He also suggests new legislation to penalise vandalism with MSS. The *Modern Review* (September 1941) has already endorsed some of Prof. CHAKRAVARTI's suggestions.

Codices Indici Bibliothecae Regiae Haviensis enumerati et descripti
a N. L. WESTERGAARD, Havniae, 1846.

1853

Handschriften-Verzeichnisse Königlichen Bibliothek, by Dr. WEBER,
Berlin, 1853 (Vol. I).

1857

*Catalogue raisonné of Oriental MSS in the Library of the College
Fort Saint George, now in charge of the Board of Examiners*, by
Rev. William TAYLOR, Vol. I, Madras, 1857.

1859

Contribution towards an Index to the Bibliography of the Indian
Philosophical Systems, by F. HALL Calcutta, 1859—HALL describes
this Index as "a tolerably complete indication of extant Hindu
Sophistics".

1861

*Alphabetical Catalogue of the Oriental Manuscripts in the Library of
the Board of Examiners*, by T. S. Condaswami IYER, Madras 1861.

1864

Catalogue of MSS in the Library of the Benares Sanskrit College,
(Published as a Supplement to Pandit, Vol. III-IX, Benares,
1864-74).

Catalogus Codicum Sanscriticorum Bibliothecae Bodleianae. Confecit
Th. AUFRECHT. Oxonü, 1864.

1865

*Verzeichniß Indischer Handschriften der Königlichen 'Universitäts-
Bibliothek in Tübingen*. Anhang. Indische Handschriften der
Königlichen Oeffentlichen Bibliothek in Stuttgart, Von R. ROTH,
Tübingen, 1865.

1868

*List of Sanskrit Works Supposed to be rare in the Nepalese Libraries
at Khatmandoo*, Signed R. LAWRENCE, Resident, Nepal Residency,
2nd August, 1868.

1869

A Classified and Alphabetical Catalogue of Sanskrit Manuscripts in the Southern Division of the Bombay Presidency, by F. KIELHORN, Fascicle I, Bombay, 1869.

Catalogue of Sanskrit Manuscripts in the Library of Trinity College, Cambridge, by Th. AUFRECHT. Cambridge, 1869.

1870

A Descriptive Catalogue of Sanskrit, Pali, and Sinhalese Library Works of Ceylon, by James D'ALVIS, 1870.

Catalogue of a Collection of Sanskrit MSS, by A. C. BURNELL, Part I (Vedic MSS), London, 1870.

1871

Catalogue of Sanskrit MSS, contained in the Private Libraries of Gujarat, Kathiawad, Kachchh, Sindh and Khāndeś, Fascicules I to IV, 1871-1873 by G. BÜHLER.

Notices of Sanskrit MSS, by Rajendralal MITRA, Calcutta, Vols. I to XI (1871 to 1895).

1872

Report on the results of the Search for Sanskrit Manuscripts in Gujarat during 1871-72, by G. BÜHLER, Surat, 1872.

1874

Catalogue of Sanskrit Manuscripts existing in the Central Provinces, by F. KIELHORN, Nagpur, 1874.

Catalogue of Sanskrit MSS in Private Libraries of the North-West Provinces, Part I, Benares, 1874.

1875

Report on Sanskrit Manuscripts 1872-73, by G. BÜHLER, Bombay, 1874.

A Catalogue of Sanskrit Manuscripts existing in Oudh for the quarter ending 30th September 1875, by J. S. NESFIELD.

1876

Report on Sanskrit Manuscripts 1874-75, by G. BÜHLER, Girgaun. 1875.

Verzeichniss der orientalischen aus dem Nachlasse des Professor Dr. Martin Haug in München, by Dr. Georg ORTERER, München, 1876.

Catalogue of Buddhist, Sanskrit MSS in the R. A. S. London (Hodgson Collection), by E. B. COWELL and J. EGGELING. *JRAS.* N. S. 1876.

Catalogi Librorum Manuscriptorum Orientalium a Ioanne Guildemesterio adorneti, Fasciculus VII, Bonnae, 1876.

1877

Descriptive Catalogue of Sanskrit MSS in the Library of the Asiatic Society of Bengal, Part I, (Grammar), by Rajendralāl MITRA, Calcutta, 1877.

Catalogue of Sanskrit MSS in Private Libraries of the North Western Provinces, Parts I to X (from 1877-86).

Detailed Report of a Search of Sanskrit Manuscripts made (in 1875-76) in Kashmir, Rajputana and Central India, by G. BÜHLER (Extra No. XXXIVA, Vol. XII of the Journal of the Bombay Branch of the Royal Asiatic Society,) Bombay, 1877.

1878

List of Sanskrit MSS discovered in Oudh during the year 1877, by Pandit DEVĪPRASĀDA, Allahabad, 1878.

List of Sanskrit MSS discovered in Oudh during the year 1876, Prepared by John NESFIELD assisted by Pandit DEVĪPRASĀDA, Calcutta, 1878.

Papers relating to the Collection and Preservation of the Records of Ancient Sanskrit Literature, by A. E. GOUGH, Calcutta, 1878.

1879

Lists of Sanskrit MSS discovered in Oudh (during 1879), by Pandit DEVĪPRASĀD, Allahabad, 1879.

Report on the Compilation of a Catalogue of Sanskrit MSS for the year 1879-80, by Pt. Kashināth KUNTE, Lahore.

1880

Report on Sanskrit MSS for the year 1880-91, by Pt. Kashinath KUNTE. *Classified Index to the Sanskrit MSS in the Palace at Tanjore*, by A. C. BURNELL, London, 1880.

Catalogue of Sanskrit Manuscripts in the Library of H. H. the Maharaja of Bikaner, by Rajendralāl MITRA, Calcutta, 1880.

A Report on 122 Manuscripts, by R. G. BHANDARKAR, Bombay, 1880.

Lists of Sanskrit MSS in Private Libraries of Southern India, by Gustav OPPERT, Vol. I (1880), II 1885, Madras.

1881

Catalogue of Sanskrit MSS existing in Oudh, by DEVĪPRASĀD, Fascicules III-XIII (1881 to 1890).

Report on the Search for Sanskrit Manuscripts in the Bombay Presidency during 1880-81, by F. KIELHORN, Bombay, 1881.

Lists of the Sanskrit Manuscripts purchased for Government during the years 1877-78, and 1869-78 and a List of the Manuscripts purchased from May to November 1881, by F. KIELHORN, Poona, 1881.

Annales du Musée Guimet. Tome Deuxime, Paris, 1881. Analyse du Kandjour, A. Cosma de KÖROS add M. Léon FEER and Abregé des Matieres du Tondjour par Cosma DE KÖRÖS.

1882

Über eine kurzlich für die Wiener Universität erworbene Sammlung von Sanskrit und Prakrit-Handschriften, von George BÜHLER, Wien, 1882.

Statement showing the old and rare MSS in Gujranwala and Delhi Districts, Punjab examined during the year 1881-82, by Pandit Kashinath KUNTE, Lahore, 1882.

Catalogue of Pali MSS in the India Office Library, by H. OLDENBERG, London, 1882, (Appendix to the Journal of the Pāli Text Society, 1882).

The Sanskrit Buddhist Literature of Nepal, by Rajendralal MITRA, Calcutta, 1882.

A Report on the Search of Sanskrit Manuscripts during 1881-82, by R. G. BHANDARKAR, Bombay, 1882.

Catalogue of MSS and Books belonging to the Bhau Dāji Memorial, Bombay, 1882.

1883

A Catalogue of the Chinese Translation of the Buddhist Tripiṭaka, by B. NANJIO, Oxford, MDCCCLXXXIII (1883).

Catalogue of the Buddhistic Manuscripts in the University Library, Cambridge, by Cecil BENDALL, Cambridge, 1883.

A Report on the Search for Sanskrit Manuscripts in the Bombay Circle, August 1882 to March 1883, by P. PETERSON, Extra No. XLI, Vol. XVI of the Journal of the Bombay Branch of the Royal Asiatic Society, Bombay, 1883.

1884

Catalogue of Sanskrit MSS in Mysore and Coorg, by Lewis RICE, Bangalore, 1884.

A *Catalogue of the Sanskrit Manuscripts in the Library of the Deccan College*, (being lists of the two Viśrāmbāg Collections)—Part I prepared under the superintendence of F. KIELHORN ; *Part II* and Index prepared under the superintendence of R. G. BHANDARKAR, 1884.

A Second Report of Operations in Search of Sanskrit Manuscripts in the Bombay Circle, April 1883 to March 1884, by P. PETERSON. Extra No. XLIV, Vol. XVII of the Journal of the Bombay Branch of the Royal Asiatic Society, Bombay, 1884.

A *Report on the Search for Sanskrit Manuscripts in the Bombay Presidency during 1882-83*, by R. G. BHANDARKAR, Bombay, 1884.

1886

Verzeichniss der Sanskrit und Prākṛit Handschriften (der Königlichen Bibliothek in Berlin) Von A. WEBER, Berlin, 1886. (This Catalogue is a continuation of the Volume published in 1853 and describes numbers 1405-1772.

1887

A Third Report of Operations in Search of Sanskrit Manuscripts in the Bombay Circle April 1884 to March 1886, by P. PETERSON. Extra No. XLV of Vol. XVII of the Journal of the Bombay Branch of the Royal Asiatic Society, Bombay, 1887.

A *Report on the Search for Sanskrit Manuscripts in the Bombay Presidency during 1883-84*, by R. G. BHANDARKAR, Bombay, 1887.

Catalogue of Sanskrit MSS in the Library of the India Office

Part I (Vedic) 1887

Part II (Vyākaraṇa etc.) 1889

Part III (Rhetoric) 1891

Part IV (Philosophy etc.) 1894

Part V (Medicine etc.) 1896

Part VI (Poetical Literature
Epic & Paurāṇik literature)
1899

Part VII (Kāvya, Nāṭaka) 1904.

1888

Catalogue of the Collections of MSS deposited in the Deccan College, by S. R. BHANDARKAR, Bombay, 1888.

1890

Catalogue of Sanskrit MSS existing in Oudh Province for the year 1888, by Pt. Devī PRASĀD (XXI to XXII) 1890 to 1893, Allahabad.

1892

Catalogue of the Sanskrit MSS, in the Library of H. H. the Maharaja of Ulwar, by P. PETERSON, Bombay, 1892.

Florentine Sanskrit MSS examined by Theodor AUFRECHT, Leipzig, 1892.

Handschriften-Verzeichniss der Königlichen Bibliothek zu Berlin, II, 3, Berlin, 1892.

Descriptive Catalogue of Sanskrit MSS in the Library of the Calcutta Sanskrit College, by Hṛṣikeśa SHASTRY. Parts I to IX, Calcutta, 1892.

1893

Alphabetical Index of MSS in the Govt. Oriental MSS Library, Madras, Madras, 1893.

Lists of Sanskrit MSS in Private Libraries in the Bombay Presidency, by R. G. BHANDARKAR, Part I, Bombay, 1893.

The Weber Manuscripts. Another Collection of Ancient MSS from Central Asia by Dr. A. F. R. HOERNLE, (Reprint from JASB, Vol. LXII, Pt. 2, 1893.)

Catalogue of Sanskrit Manuscripts at Jammu, by M. A. STEIN. N. S. Press, Bombay, 1894.

1894

A Fourth Report of Operations in Search of Sanskrit Manuscripts in the Bombay Circle, April 1886 to March 1892, by P. PETERSON. Extra No. XLIXA of Vol. XVIII of the Journal of the Bombay Branch of the Royal Asiatic Society, Bombay, 1894.

A Report on the Search for Sanskrit Manuscripts in the Bombay Presidency during 1884-87, by R. G. BHANDARKAR, Bombay, 1894.

1895

An Alphabetical Index of Manuscripts purchased upto 1891, (Printed at the end of Notices of Sanskrit Manuscripts, by M. M. Haraprasad SASTRI, Vol. XI, Calcutta, 1895. (MSS in this list are described in the volumes of the Descriptive Catalogue of the Asiatic Society, Bengal, by M. M. Haraprasad Sastri).

Descriptive Catalogue of Sanskrit MSS in the Library of the Calcutta Sanskrit College, by Hṛṣīkeśa ŚĀSTRĪ & Śiva Candra GU, Vol. I (1895), Vol. II (1898), Vol. III (1900), Vol. IV (1902) Vol. V, Fasci 1, Calcutta.

Reports on Sanskrit MSS in Southern India, by E. HULTZSCH, No. 1. Madras, 1895. No. 2 Madras, 1903?

A Fifth Report of Operations in Search of Sanskrit Manuscripts in the Bombay Circle, April 1892 to March 1895, by P. PETERSON, Bombay, 1896.

1896

Fifth Report of Operations in Search of Sanskrit MSS, in the Bombay Circle, by P. PETERSON, Bombay, 1896. *Sixth Report*, Bombay, 1899.

1898

A Report on the Search for Sanskrit Manuscripts in the Bombay Presidency during 1887-91, by R. G. BHANDARKAR, Bombay, 1897.

Notices of Sanskrit MSS (2nd Series), by M. M. Haraprasād ŚĀSTRĪ, Vols. I and II, Calcutta, 1898.

Sitzungsberichte der Kais. Akademie der Wissenschaften in Wien. Philosophisch-Historische classe, Band CXXXVII. IV. Die Tübinger Kāṭha-Handschriften und Ihre Beshung Zum. Taittirīyāraṇyaka L. Von Schroeder. Herapransgegeben Mit Einem Nachtrage von G. BÜHLER, Wien, 1898.

Report on a Search for Sanskrit and Tamil MSS for the year 1896-97 and 1893-94, No. 1 (1898), No. 2 (1899), Madras.

1899

Verzeichniss der Indischen Handschriften der Königlichen Universitäts-Bibliothek, (Zuwachs der Jahre 1865-1899) von Richard GARBE, Tübingen, 1899.

A Sixth Report of Operations in Search of Sanskrit Manuscripts in the Bombay Circle, April 1895 to March 1898, by P. PETERSON, Bombay, 1899. (This contains also a list of MSS purchased by Prof. PETERSON in 1898-99).

Catalogue of Printed Books and MSS in Sanskrit belonging to the Oriental Library of the Asiatic Society of Bengal, by Pt. Kuñja Vihāri NYĀYABHÜṢAṆ, 3 Fascicles, Calcutta, 1899-1901.

1900

Notices of Sanskrit MSS, by R. MITRA, Vol. I, Calcutta, 1900.

List of non-medical MSS collected by Dr. P. Cordier in Bengal, (January 1898 and June 1900).

Report for the Search of Sanskrit MSS (1895-1900), By Haraprasād SASTRI.

1901

Katalog der Sanskrit-Handschriften der Universitäts-Bibliothek in Leipzig, von Theodor AUFRECHT, Leipzig, 1901.

Descriptive Catalogue of the Sanskrit MSS of the Govt. Oriental Library, Madras, Vols. I to XXVII (1901 to 1939).

A Report on the Search for Sanskrit Manuscripts in the Bombay Presidency during 1891-95, by A. V. KATHAWATE, Bombay, 1901.

Bibliothèque Nationale, Catalogue Sommaire des Manuscrits Sanscrits et Palis, Paris, 1901 II : 2c Fascicule—Manuscrits Fālis Par A. CALEATON.

1902

Catalogue of South Indian Sanskrit MSS (especially those of the Whish Collection) in the Royal Asiatic Society, London, 1902.

Jaina Granthāvali, published by Jain Śvetāmbara Conference, Bombay, 1902 (A List of Jain Works).

Catalogue of the late Prof. Fr. Max Müller's Sanskrit MSS, compiled by Don M. de Z. WICKREMASINGHE, JRAS, 1902, pp. 611-651.

A Catalogue of the Sanskrit Manuscripts in the British Museum, by Cecil BENDALL, London, 1902.

1904

Notices of Sanskrit MSS, by R. MITRA, Vol. II, Calcutta, 1904.

1905

Catalogue of Sanskrit Manuscripts in the Bodlien Library, Vol. II begun by Dr. M. WINTERNITZ and completed by Dr. A. B. KEITH, Oxford, 1905.

A Catalogue of Palm-leaf and Selected Paper Manuscripts belonging to the Durbar Library, Nepal, by M. M. Haraprasad SASTRI, M.A. with a Historical Introduction by Prof. C. BENDALL, M.A., Calcutta, 1905.

1906

Report on the Search of Sanskrit Manuscripts, by M. M. Haraprasad SASTRI, 1906.

1907

Notices of Sanskrit MSS, by R. MITRA, Calcutta, 1907 Vol. III.

Bibliothèque Nationale, Department des Manuscripts, Catalogue Sommaire des Manuscripts. Sanscrits et Palis par A. CALETON, Paris. I : 1er Facicule Manuscripts Sanscrits, 1907.

Report of Second Tour in Search of Sanskrit Manuscripts made in Rajputana and Central India, in 1904-05 and 1905-06, by S. R. BHANDARKAR, M.A., 1907.

1908

Alphabetical List of Jain MSS belonging to the Govt. in the Oriental Library of the Asiatic Society, Bengal, JASB, 1908 (pp. 407-440).

Descriptive List of Works on Mādhyamika Philosophy, by M. M. Dr. Satischandra VIDYABHUSHAN, JASB, 1908 (pp. 367-370).

Descriptive List of Some Rare Sanskrit Works on Grammar, Lexicography, and Prosody, recovered from Tibet, by M. M. Dr. Satischandra VIDYABHUSHAN, JASB, 1908, (pp. 593-598).

1909

Die Sanskrit-Handschriften der K. Hof und Statsbibliothek in München. Theodor AUFRECHT, München, 1909. Tomi I, Pars V. Catalogus Codicum Manuscriptorum Bibliothecae Regiae Monacensis.

Catalogue du Fonds Tibetain de la Bibliothèque Nationale Par P. CORDIER, Paris, MDCCCXCIX Part II.

1912

Catalogue of the Stein Collection of Sanskrit Manuscripts from Kashmir, Collected by M. A. STEIN and now deposited in the Indian Institute, Oxford, by G. L. M. CLANSON JRAS 1912, (pp. 587-627).

Bibliothèque Nationale. Catalogue Sommaire des Manuscripts, Paris 1912 III : Catalogue Sommaire des Manuscripts Indiens etc. Par A. CALETON.

1913

Triennial Catalogue of MSS—Govt. Ori. MSS Library, Madras, Vols. I to VIII (1913-1939).

1915

Catalogue du Fonds Tibétain de La Bibliothèque Nationale par P. CORDIER, Paris, Part III, MDCCCXV.

1916

Manuscript Remains of Buddhistic Literature found in East Turkestan, by A. F. R. HOERNLE, Oxford, 1916.

Descriptive Catalogue of the Government Collections of Manuscripts deposited in the Bhandarkar O. R. Institute, Poona, Vol. I (Vedic Literature) 1916.

1917

A Descriptive Catalogue of Sanskrit Manuscripts in the Government Collections under the care of the Asiatic Society of Bengal, by M. M. Haraprasad SASTRI, Vol. I (Buddhistic) Calcutta, 1917.

1918

Catalogue of Indian Manuscripts Library Publication Department, Collection of E. P. MINAEV and some friends, compiled by N. D. MIRONOFF Pt. I, Published by the Russian Academy of Sciences, Petrograd, 1918.

1919

A Catalogue of Samskr̥ta, Prākṛta and Hindi Works in the Jain Siddhanta Bhavan, Arrah, edited by Suparsva DAS GUPTA, B.A. Arrah, 1919.

A Catalogue of Sanskrit Manuscripts acquired for the Government Sanskrit Library, Sarasvati Bhavana, Benares. 1897-1919 (1907 and 1908 not available).

1920

List of Manuscripts in the Telugu Academy, Cocanada, published in 1920, in Telugu Script in the Journal of the Academy (304 MSS).

1921

Kavīndrācārya List, edited with Introduction, by R. Anantakrishna SASTRI, GOS XVII, 1921 (A List of the MSS which existed once in the Library of Kavīndrācārya, Benares).

1922

Catalogue of Sanskrit Manuscripts in the Government Oriental Library, Mysore, 1922 (A mere list of Names).

1923

Descriptive Catalogue of Sanskrit Manuscripts deposited in the Government Sanskrit Library, Sarasvati Bhavana, Benares, Vol. I, Pūrva Mīmāṃsā, by M. M. Gopinath KAVIRAJ, M.A. 1923 (A List with extracts from Select Manuscripts).

A Catalogue of Manuscripts in Jesalmere Bhaṇḍārs GOS XXI, Baroda, 1923.

Descriptive Catalogue of MSS (A. S. B.) by M. M. Haraprasad SASTRI, Vol. II (Vedic), Calcutta, 1923.

Descriptive Catalogue of MSS (A. S. B.) Vol. IV (History and Geography) Calcutta, 1923.

1924

La collection Tibetain Schillong von Canstadt à la Bibliotheque de l' institut, Par Jacques BACOT. Journal Asiatique CCV, 1924, pp. 321-348.

1925

Descriptive Catalogue of Sanskrit and Prakrit MSS in the Library of the Bombay Branch of Royal Asiatic Society, Vols. I to IV, by H. D. VELANKAR, Bombay, 1925 to 1930.

Catalogue of Manuscripts in the Central Library, Baroda. Vol. I (Vedic) by G. K. SHRIGONDEKAR M.A. and K. S. Ramaswami SASTRI, Śiromaṇi, GOS XXVII, 1925 (A List with an appendix of extracts from Select MSS).

Descriptive Catalogue of MSS (A. S. B.) Vol. V (Purāṇa), by H. P. SHASTRI, Calcutta, 1925.

Descriptive Catalogue of MSS (A. S. B.) by M. M. Haraprasad SASTRI, Vol. III (Smṛti), Calcutta, 1925.

Lists of Manuscripts collected for the Government Manuscripts Library, by Professors of Sanskrit at the Deccan and Elphinstone Colleges containing the following collections :—

- (i) 1895-1902, (ii) 1899-1915, (iii) 1902-1907 (iv) 1907-1915, (v) 1916-1918, (vi) 1919-1924 (vii) 1866-68.

Published by B. O. R. Institute, Poona, 1925.

1926

Catalogue of Sanskrit and Prākṛta Manuscripts in the Central Provinces and Berar, by Rai Bahadur HIRALAL, B.A., Nagpur, 1926, (A List).

A Catalogue of Sanskrit Manuscripts in the Adyar Library, (a mere Index of Names) by the Pandits of the Adyar Library, Part I (Adyar, 1926).

1927

Descriptive Catalogue of Manuscripts in Mithila, Published by Bihar and Orissa Research Society, Patna. Vol. I (Smṛti MSS), by Dr. K. P. JAYASVAL and Dr. Ananta Prasad SHASTRI, 1927.

1928

Descriptive Catalogue of Sanskrit MSS in the Sarasvati Mahal Library, Tanjore, by P. P. S. SHASTRI, Srirangam, Vol. I to Vol....., 1928 to.....

A Supplemental Catalogue of Sanskrit Manuscripts Secured for the Govt. Oriental Library, Mysore, 1928 (a mere list of names).

A Catalogue of Sanskrit Manuscripts in the Adyar Library, by the Pandits of the Adyar Library, (a mere Index of Names), Part II, Adyar, 1928.

1929

Descriptive Catalogue of Marathi MSS and Books in the Sarasvati Mahal Library Tanjore, Vol. I to Vol.....Tanjore, 1929 to.....

Revised Catalogue of the Palace Granthapura (Library), Trivandrum, by K. Sambasiva SASTRI, 1929. (A list of MSS and printed books also).

1930

Nachrichten von der Gesellschaft der Wissenschaften zu Göttingen. Philologisch-Historische Klasse, 1930, Heft I, pp. 65 ff. Kielhorns Handschriften-Sammlung, by R. FICK. Berlin, 1930, (Last part of the Catalogue with Index).

Descriptive Catalogue of Assamese MSS, by Hemachandra GOSVAMI published by the University of Calcutta on behalf of the Government of Assam, 1930 (Part II of this volume describes Sanskrit MSS).

- A Catalogue of Photographs of Sanskrit Manuscripts, purchased for the Administrators of Max Müller's Memorial Fund, Compiled by T. R. GAMBIER-PARRY, M.A., Oxford University Press, London, 1930.

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on the basis of Notes of the late C. D. DALAL.

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H. I. POLEMAN, American Oriental Series, Vol. 12, American Ori-
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— P. K. GODE.

 ADDENDA

The following list has been drawn up since the preceding list was printed off.

1. A Printed Catalogue of 114 Sanskrit MSS in the private Library of the Maharaja, Tagore Castle, Calcutta.
2. Descriptive Catalogue of the Sanskrit Manuscripts in the Tanjore Maharaja Sarfoji's Saraswati Mahal Library, Tanjore, By P. P. S. SASTRI, B.A. (Oxon.); M.A.—19 Vols. Vol. XIX is a mere list of names of works.
3. Catalogue of Sanskrit Manuscripts collected by the Curator of the Department for the publication of Sanskrit Manuscripts, Trivandrum, By T. Ganapati SASTRI, (7 parts).
4. Lists of MSS collected by the Curator for the publication of Sanskrit MSS, Trivandrum, published as Appendices to the Annual Administration Reports of the Travancore State.
5. Annual Reports of the Sri Ailak Pannalal Digambar Jain Saraswati Bhavan Sukhānand Dharmaśālā, Bombay (in 5 parts).

6. Descriptive Catalogue of Sanskrit Manuscripts in the Government Oriental Library, Mysore. This is in the press.
7. Descriptive Catalogue of Sanskrit Manuscripts in the Government Oriental MSS. Library, Madras. Vols. XX-XXVII by Prof. S. KUPPUSWAMI SASTRI, M.A.
8. Descriptive Catalogue of Sanskrit Manuscripts in the Government Oriental MSS Library, Madras. Vol. XVI, XVII and XIX by Prof. M. RANGACHARYA, M.A. and Prof. S. KUPPUSWAMI SASTRI, M.A.
9. Descriptive Catalogue of Sanskrit Manuscripts in the Government Oriental MSS. Library, Madras. Vol. II-XV and XVIII by Prof. M. RANGACHARYA, M.A.
10. Descriptive Catalogue of Sanskrit Manuscripts in the Government Oriental MSS. Library, Madras. Vol. I, Parts ii and iii by Prof. M. Sheshagiri SASTRI, M.A. and Prof. M. RANGACHARYA, M.A.
11. Descriptive Catalogue of Sanskrit Manuscripts in the Government Oriental MSS. Library, Madras. Vol. I, Part i by Prof. M. Sheshagiri SASTRI, M.A.
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15. A Supplementary Catalogue of Sanskrit Works in the Sarasvati Bhandaram Library of H. H. the Maharaja of Mysore signed by F. KIELHORN.
16. A few original MSS. now preserved in the University Library of Strassburg—GOLDSTÜCKER.
17. Die Sanskrit—Handschriften der Universitäts—Bibliothek zu Göttingen. Beschrieben von Professor F. KIELHORN.
18. Alphabetical lists of MSS. in the Indian Institute, Oxford by A. B. KEITH.
19. A List of Tibetan Buddhist Manuscripts, by Rev. Rāhula SĀṆKṚTYĀYANA. Journal of the Bihar and Orissa Research Society, Vol. XXIII, Part i.

20. A List of 69 MSS. from the Private Collection of MSS with Pandit Dharmānāth ŚĀSTRĪ, Sanskrit Teacher, Government High School, Mangaldai Assam, published in an Assamese daily.
21. Liste der indischen Handschriften im Besitze des Prof. H. JACOBI (Printed in *ZDMG* Vol. 33, 693.)
22. Über eine Sammlung indischer Handschriften und Inschriften von E. HULTZSCH (Printed in *ZDMG.* Vol. 40.1).
23. Two Lists of Sanskrit MSS. by G. BÜHLER. (Printed in *ZDMG.* Vol. 42, 530).
24. A consolidated Catalogue of the Collections of Manuscripts deposited in the Deccan College (from 1868-1884) with an Index by S. R. BHANDARKAR.
25. De Codicibus nonnullis Indiscis qui in Bibliotheca Universitatis Lundensis asservantur Scrifisit Hjamar EDGREN. Lunds Uni. Aarskrift. Tom XIX (15 MSS).
26. A Partial list of rare MSS belonging to the Adyar Library (60 works).
27. List of Fifteen MSS. in the Edinburgh University Library by Prof. EGGEING.
28. MSS. in the possession of Prof. Julius JOLLY at Wurzburg and at the Wurzburg University Library.
29. Tod MSS in the Royal Asiatic Society, London.

APPENDIX III

ON SOME IMPORTANT MANUSCRIPTS AND CRITICAL EDITIONS ✓

As the present work is mainly addressed to postgraduate students of Indian Universities who wish to take up the critical editing of ancient or medieval Indian classical texts, and generally to other scholars who have not yet mastered the fundamental aspects governing the textual criticism of Indian texts, this appendix aims at giving just a little information about some important manuscripts and critical editions, a knowledge of which will add to their general equipment. No attempt has been made here either to be exhaustive in the treatment of those Mss. or critical editions selected for description here, or to be comprehensive in that selection. It is hoped that the brief information contained herein will lead the reader himself to make further investigations in this fascinating field and make some definite and original contribution to our knowledge of Indian texts, which is after all the main object of the present work.

A. Manuscripts.

Bakhshālī Manuscript. In 1881 a mathematical work written on birch-bark was found at Bakhshālī near Mardān on the north-west frontier of India. This manuscript was supposed to be of great age. It was found by a tenant of Mian An-Wan-Uddin, Inspector of Police, who brought it to the Assistant Commissioner at Mardān; the finder of the Ms. alleged that he found it while digging in a ruined stone enclosure on one of the mounds near Bakhshālī, but this account is rather unsatisfactory, and according to Mr. KAYE who has edited it for the Government of India in 1927, it is not altogether reliable. The Ms. was subsequently sent to the Lieutenant-Governor of Panjab who, on the advice of General CUNNINGHAM, had it sent to Dr. HOERNLE. In 1902 Dr. HOERNLE presented the Ms. to the Bodleian Library where it forms part of one of the most valuable collections of Indic Mss. It consists of 70 leaves of birch-bark but some of these are mere scraps, and the average size of the leaves is 7 by 4 inches. It is written in the Śāradā script and the language is popular Sanskrit partaking of Middle Indo-Aryan characteristics which led earlier scholars to adopt the designation 'Gāthā dialect'. The style of writing, however, is not uniform and several 'hands' can be distinguished. Immediately after its discovery scholars assumed

on several grounds that the Ms. belonged to the second century A.D., while HOERNLE placed it not later than the 10th century A.D. Mr. KAYE has, on a very elaborate examination of the script, arrived at the conclusion that the Ms. belongs to the 12th century A.D. The Ms. has been edited and published by the Archæological Survey of India as New Imperial Series, Vol. XLIII, Parts i-ii 1927, Part iii, 1933.

Bower Manuscript. While Lieut. BOWER was at Kuchar at Kashgaria, a man offered to show him a subterranean town, provided he would go there in the middle of the night. The same man procured for him a packet of old Mss. written on birch-bark, dug out of the foot of one of the curious old erections, just outside this subterranean city. The Ms. consisted of 56 leaves, some in single thickness and some of two to four thicknesses, for the most part written on both sides. The writing is in black ink and in several hands. Some leaves appear perfectly fresh and clear ; others are much discoloured ; all are very brittle and tender. The first notice of this Ms. appears in the *Proceedings* of the Asiatic Society of Bengal for November 1890, and again in April 1891. In *JASB* 1891 HOERNLE gives his findings regarding the date of the Ms. on palæographic evidence as the fifth century A.D. The Ms. consists of not less than five distinct portions as follows : A, leaves 1-31, contains a medical treatise ; B, 32-36, a collection of proverbial sayings ; C, 37-40, a story of how a charm against snake-bite was given by Buddha to Ananda ; D, 41-46, a collection once again of proverbial sayings ; and E, 47-51, the beginning of another medical treatise. The remaining folios are detached leaves. The whole Ms. is written in the North-Western Gupta characters. It has been edited by HOERNLE and published in three parts in the Archæological Survey of India Series.

Codex K 5 is well-known in Iranian studies as the best (and complete) Ms. for the restoration of the Avesta text. It is now in the Rask collection of Mss. deposited in the Copenhagen Library. This codex contains the Yasna with Pahlavi translation, and is the best and oldest of all Mss. of the text. It contains 327 folios, paged with Devanāgarī numbers, measuring $10\frac{3}{4}$ by $8\frac{3}{4}$ inches, with 17 lines to the page. There is a double colophon in Pahlavi and Sanskrit on fol. 326b ; according to this Herbad Mitrô-âpân-Kai-Khusrôvô Mitrô-âpân Spend-dâd-Mitrô-âpân Marzapân Bâhrâm copied the Ms. in Cambay from a Ms. of Herbad Rûstam Mitrô-âpân to order for Câhil Sangam in the aforesaid city ; finished on the day Âsmân of the month of Dên A.Y. 692, Samvat 1379 (November 17, 1323 A.D.). Fol. 70-77 still existed in WESTERGAARD's day when he edited the Avesta, but these were in utter decay while GELDNER used them for his edition. The Ms. has since been reproduced by chromophotography by the Copenhagen Royal Library.

Fragments of Indian Literature found in Turfan. A German Expedition under GRÜNWEDEL and HUTH was organised to tour Turfan in 1902. During 1904-1907 two further expeditions were organised with State cooperation under the direction of LE COQ and GRÜNWEDEL. The literary remains which they unearthed was sent to Berlin, and under the able editorship of LÜDERS they were published in a series entitled *Kleinere Sanskrit Texte* under the aegis of the Königlich Preussische Turfan-Expedition. One of the most important of these finds has been edited by LÜDERS himself as the first Heft in this series, called *Bruchstücke Buddhistischer Dramen* in 1911. These fragments of palm-leaf Mss. were discovered by LE COQ in the cave temple at Mingai and total 144 pieces. The material, palm-leaf, shows definitely that the fragments hail from India whence they were taken to Turfan. A study of the script shows that it is identical with that found in the inscriptions of the Northern Kṣatrapas and the Kushanas. Thus these fragments are in effect the earliest palm-leaf documents which have come down to us. The fragments here edited represent parts of two plays which are attributed to Aśvaghoṣa.

Gilgit Manuscripts were found in a *stūpa* near Gilgit owing to a chance discovery made by a cow-boy. Before the Wazir of Gilgit took charge of them a substantial portion of the Mss. and all the painted covers had passed into the hands of adventurers. The bundle of leaves which were thus damaged are now in the possession of the Kashmir Darbar and are in Government custody. On palaeographical grounds the Mss. are to be dated not later than the 7th century, and are therefore the earliest Mss. to be discovered within India. The Mss. were deposited within the vault of a *stūpa*. The language in which these Mss. are composed is what is termed by EDGERTON as Buddhist Sanskrit similar to that found in *Mahāvastu*, *Lalitavistara*, etc. One of the chief features of the Mss. is that the end of one text and the beginning of another are not separated by any space, and as far as this feature is concerned they may be compared with Tibetan xylographs. The discovery of these Mss. was first announced by Sir Aurel STEIN in the *Statesman* of 24th July 1931. Later M. HACKIN visited the actual spot and wrote on them in 1932 (*JA* 14-15). The first volume based on these Mss. entitled the Gilgit Manuscripts has been edited for the Government of Kashmir by Dr. Nalinaksha DATT with the assistance of Prof. D. M. BHATTACHARYA and Viḍyāvāridhi Shiv Nath SHARMA in 1939.

Godfrey Manuscripts are so called because they were received by Capt. S. H. GODFREY, British Joint Commissioner of Ladak, from some Pathan merchants whom he had helped to cross the flooded Leh trade route at Kargil in July 1895, alleged to be dug up near some old

buried city in the vicinity of Kuchar. The collection consists of 71 pieces of paper Ms. most of which are mutilated. This was partially reproduced by HOERNLE in *JASB* for 1897.

Horiuzi Manuscript. In the preface to a Chinese-Sanskrit-Japanese vocabulary entitled 'Thousand Sanskrit and Chinese Words', edited by a priest called Zakumio in 1727, the following entry occurs : 'In the monastery of Horiuzi in Yamato, there are preserved the Prajñāpāramitāhṛdayasūtra and Sonshio-dhāraṇī, written on two palm-leaves, handed down from Central India, and at the end of these, the fourteen sounds of the Siddham (alphabet) are written. In the present edition of the vocabulary the alphabet is in imitation of that of the palm leaves, except in such forms of letters as cannot be distinguished from those prevalent among the scribes of the present day.' This is conclusive evidence to show that so late as 1727 palm-leaves containing the text of Sanskrit Sūtras were still preserved in the monastery of Horiuzi. This monastery is one among the famous eleven monasteries established by Prince Umayado who died in 621 A.D. The tradition pertaining to the Manuscripts points out that they were in the possession of some Chinese priests who lived in a monastery on the mountain called Nan-yo in the province of Hang(Kô) in China. In the 37th year of Prince Umayado, i.e. in A.D. 609, a retainer of the Mikado, by name Imoko, brought them to Japan. The following information is recorded by MAX MÜLLER in his preface to *Anecdota Oxon.* I, i, p. 10 : Horiuzi, province of Yamato, head priest Giokio Kibaya : Prajñāpāramitāhṛdaya-sūtra and Ushnīshadhāraṇī, now transferred to the Imperial Government. They existed at Horiuzi in 1727 when they were seen by Zakumio; were copied by Ziogon in the seventeenth century; brought to Japan in 609 A.D.; may have belonged to Bodhidharma (A.D. 520) and were attributed to Kāśyapa. These have been edited by him and NANJIO in *Anec. Oxon.* I, iii, with an appendix on Palæographical Remarks on Horiuzi Palm-leaf Mss. by G. BÜHLER who remarks as follows : 'The Ms. is evidently written by an Indian scribe and cannot be dated later than the first half of the sixth century. The size of the leaves is 11½ inches in length and from 2 to 1¾ inches broad. Each leaf shows two small holes, placed 3 inches from either end and almost exactly in the middle between the top and the bottom, dividing the fourth line into three parts. The first leaf contains six and a half lines and the second seven lines. The characters resemble the Gupta variety on the evidence of which BÜHLER places them in the first half of the sixth century.

Kharosthi Dhammapada, also called **Prakrit Dhammapada** or **Manuscript Dutreuil de Rhins**, consists of remarkable fragments of a birch-bark codex which the ill-starred French traveller, M. DUTRE-

UIL DE RHINS acquired in Khotan in 1892. The larger part of these fragments had already been acquired by M. PETROWSKY, Russian Consul General at Kāshgar, through whose mediation they were sent to the Imperial Academy at St. Petersburg. The actual find-spot of these fragments is not known, but the Kohmari cave on the hill of Gośṛṅga was alleged to be the source from which the fragments were recovered by some natives. Both M. DUTREUIL DE RHINS who first visited the place and received the fragments and M. GRECARD who visited the spot a month later and secured what he believed to be the rest of the Ms. were ignorant of the actual find-spot. According to STEIN this must ever remain undecided, since his visit to the cave under discussion showed that there were no traces of any recent opening visible anywhere in the rock walls. *The Dutreuil de Rhins Ms.* is now in Paris while its larger portion is in St. Petersburg. These fragments are assigned to *circa* 200 A.D., have been edited by SENART in J.A 1898, and again by BARUA for the Calcutta University under the title *Prakrit Dhammapada*. On account of the identification of Kohmārī with the Mt. Gośṛṅga, RHYS DAVIDS called this codex as the Gosinga Kharosthi Ms. (JRAS 1899, 426).

Macartney Collections of Fragments consist of mere scraps of Mss. They had been presented to Mr. MACARTNEY, British Agent in Kashgar, by the Manager of the Chinese Foreign Commerce in that town, and are believed to have been dug out in a mound near Kuchar. HOERNLE however believed that the locality where these fragments were found was the same from which the Bower and Weber Mss. have been recovered. The material of these fragments is of three different kinds : palm-leaf, birch-bark and paper. The fragments number 145 pieces, consisting of 13 birch-bark, 9 palm-leaf and the rest paper. Irrespective of the material they are inscribed with two distinct types of Brāhmī : Northern Indian (Gupta) and Central Asian. They have been reproduced in part by HOERNLE in JASB 1897.

Macartney Manuscripts were obtained by Mr. G. MACARTNEY, Special Assistant for Chinese Affairs at Kashgar to Lt.-Col. Sir A. C. TALBOT, British Resident in Kashmir. They consist of 6 sets : Set I found in the same site as the Bower Ms. and another Ms. found here finds its place in the Weber Ms. The script is two-fold, Central Asian and Northern Indian Brāhmī (Gupta). Set IV found at Karakul Mazan Khojan about 50 miles east of Guma ; the Ms. was simply picked up from the sand. Set II found at Aksuful, N.-E. of Khotan. Set III found at Jabu Kum, 50 to 60 miles N.-E. of Khotan. Set V found in the desert at Kuk Gumbaz, 5 days' march east of Guma. It was found near a circular wall of baked bricks 3 feet high in another wall in which a hole plastered over was discovered. Set VI was

picked up from the ground at Kuk Gumbaz. According to HOERNLE the Ms. Ib probably belongs to the 2nd century A.D. The material is a soft kind of paper with a darkish colour. The pagination on Ms. Ib is on the obverse; cf. p. 12 above. Several folios of these Mss. have been reproduced in *JASB* 1897.

Birch-bark Ms. of the Mahābhārata in Śāradā characters containing fragments of the Ādi and Vanaparvans and the whole of Sabhā, No. 159 of 1875-76, purchased for the Government of Bombay by BÜHLER in Kāśmīr. Belongs probably to the 16th or 17th century. It is a unique and valuable manuscript, consisting of 114 folios some of which are fragmentary. Its siglum is S₁ in the critical apparatus of the Poona Critical Edition. It represents the textus simplicior of the Great Epic, being the shortest known version. For further details vide SUKTHANKAR, *Prolegomena*, pp. X-XI, XLVII-XLVIII.

The oldest extant Ms. of the Ādiparvan is a palm-leaf Ms. recently acquired by Rajaguru Hemraj Panditjiu of Nepal and is about 700 years old. The writing is throughout in old faded ink and it contains only the Ādiparvan but is complete in itself without any folios missing. The average folio measures 21" by 2½" and contains uniformly 7 lines of writing. From the specimen photographs SUKTHANKAR compared the script with BÜHLER's *Paleographische Tafeln* and found that it comes close to the script of Tafel VI, No. XL (Cambridge Ms. No. 1691 of A.D. 1179). A full description of this oldest Nepali manuscript of the Great Epic is given by SUKTHANKAR in his *Epic Studies VII, Annals BORI*, 19, 201-262 with full collations for the Ādiparvan.

The Paippalada Ms. of the Atharva Veda was originally in the possession of the library of H. H. the late Maharaja Ranbir Singh of Jammu and Kashmir. In the year 1875 the Maharaja had this Ms. sent to Sir William MUIR, the then Lieutenant Governor, by whom it was in turn despatched to Prof. ROTH of Germany. On the death of Prof. ROTH in 1895 the Ms. passed on to the Tübingen University. It is the most priceless Ms. so far as the Kāśmīri recension of the Atharva Veda is concerned, being a codex unicum. It consists of 275 birch-bark leaves written on both sides and is about 450 years old. It is written in the Śāradā characters; size of leaves 25 cm. by 20 cm.; text space covers 20 by 15 cm. and the writing is in indelible ink, absolutely nonsensitive to damp and water. This unique Ms. was reproduced by chromophotography by Professors M. BLOOMFIELD and R. GARBE and published in Baltimore in 1901.

Petrowsky Manuscript. This forms a complementary codex to the *Ms. Dutreuil de Rhins* and is in fact the larger part of the single work which we know today as the Kharoṣṭhī or Prakrit *Dhammapada*.

The men who sold the precious leaves to the two French travellers DUTREUIL DE RHINS and GRECARD took care to hide the fact that a larger portion of the fragments had been sold by them to the agents of M. PETROWSKY, Russian Consul at Kāshgar. Through the mediation of M. PETROWSKY this collection was subsequently sent to St. Petersburg where the Russian scholar Serge d'OLDENBURG edited the fragments. On account of their first connection with M. PETROWSKI they got their name from him.

Weber Manuscripts. The Rev. F. WEBER, Moravian Missionary in Leh in Ladak received some Manuscripts from an Afghan merchant who found them in the neighbourhood of a place called Kuigar, in a 'house' which was in ruins in his search for buried treasure. Kuigar is about 60 miles south of Yarkhand, within the borders of the Chinese territory. These Mss. seem to form a group of nine (possibly eleven) different Mss. All are written on paper of which there are two kinds. The Mss. divide themselves into two groups : Indian (Nos. 1-4) and Central Asian (Nos. 5-9). The Indian group is written in the North-Western Gupta characters, similar to those in the Bower Ms. ; the other is the Central Asian Nāgarī. According to HOERNLE no part of these Mss. can be later than c. 700 A.D. On the basis of the tridentate γ he dates them at about c. 500 A.D. being contemporary to or a little anterior to the Bower Ms.

B. Critical Editions. ✓

✓ *Harivaṃśapurāṇa* von Puṣpadanta, edited by Ludwig ALSDORF, 1936, on the basis of 3 Mss. : A¹⁶, B¹⁶ and C. Divided into two recensions, represented by A on the one side and B and C on the other.

✓ *Kālidāsa's Sakuntala* (Bengali Recension) edited by R. PISCHEL, 1st ed. 1877, 2nd ed. 1922. The first edition was based on the following Mss. Z¹⁸, S¹⁷, N, R, I¹⁹ ; commentary of Candrasekhara : C¹⁹, Ca ; of Śaṅkara : Ś. All in Bengali characters ; a Devanāgarī Ms. D was used up to beginning of Act II only. Other editions utilized : γ (CHÉZY 1830), β (Śak. 1786), δ (Sam 1926) and ϵ (Śak. 1892). For the second edition two additional Mss. H and B were collated, H being collated at beginning of Act II only.

Karpūramāñjarī of Rājasekhara, edited by Sten KONOW, 1901. Based on 11 Mss. A B¹⁶ C W¹⁵ (Jain group), N¹⁹ O¹⁹ P¹⁹ (Nāgarī), R (Kashmiri), S T U (Grantha). BURNELL opined that T was copied from S ; KONOW however derived it from U, perhaps contaminated with S in its corrections. Among the Jain Mss. B W are relatively old, B being very corrupt. P is a modern transcript. N O R are quite modern, agreeing with the Jain group as against S T U. O R and A C are much more closely connected. The 1939 edition by Manomohan

GHOSH utilised in addition 8 new Mss. 4 in the Southern script and 4 in Devanāgarī as follows : Devanāgarī D¹⁹ G I J ; Telugu X Y , Malayalam Z and Grantha V. The Southern Recension is inferior to the Northern. W is the best among these Mss. D resembles O, G goes with N and I with R. J, though a Devanāgarī Ms. appears to be a recent copy of some South Indian Ms. and resembles T U. The Northern Recension is subdivided into two versions A C, B, P, W and O R (D I), N (G); The Southern into S, U T (J X Y V) with Z agreeing partially with each.

✓ *Mahābhārata*, critically edited by Dr. V. S. SUKTHANKAR with cooperation of other scholars. For details see *Prolegomena*. The edition is based on a minimum of ten Mss., but many of the parvans stand collated from twenty, some from thirty and a few from as many as forty : the first two adhyāyas of the Ādi were collated from no less than sixty Mss. The chief scripts represented in the Mss. are Śāradā, Devanāgarī transcripts of Śāradā Mss., Nepālī, Maithilī, Bengali, Devanāgarī, Telugu, Grantha and Malayālam. These Mss. divide themselves primarily into the Northern and Southern Recensions and each divides itself further into a smaller number of groups. The Northern Recension is subdivided into the North-Western and Central Groups, comprising respectively the Śāradā (with its Devanāgarī transcripts represented by the *sigla* Ś and K respectively), and the Nepālī (Ñ), Maithilī (V), Bengali (B) and Devanāgarī (D) respectively. The Southern Recension is further subdivided into Telugu (T) and Grantha (G) on the one hand and Malayālam (M) on the other. The Ś group represents the *textus simplicior*. M represents the best Southern version. Besides these the *Devanāgarī* versions of Arjunamīśra (Da), Nīlakaṇṭha (Dn), and Ratnagarbha (Dr) have been utilized. Of the dated Mss. of *Ādi*, the following should be noticed : K₀ 1739, K₁ 1783, K₂ 1638, K₃ 1519, K₄ 1694, Ñ₁ 1511, V₁ 1528, B₁ 1740, B₂ 1759, B₃ 1786, Da₂ 1620, Dr₃ 1701. Ś₁ belongs either to the 16th or 17th century and Ñ₁ includes a praśasti of king Jayasimharāja at whose bidding the Ms. was copied, and thus points out to Nepālī samvat 516 or A.D. 1395 as the date of composition.

Mahāpurāṇa of Puṣpadanta : Ādipurāṇa, edited by P. L. VAIDYA, 1937. The critical edition is based on 5 Mss : G¹⁶ K M¹⁹ B¹⁷ P and a commentary T^{16*}. G (1518 A.D.) is the best of these Mss. which divide themselves into two recensions *X and *Y : *X is represented by G, *k, *K¹ (c. 1500) and K (c. 1600); *Y is represented by the three remaining Mss. P B and M.

✓ *Mahāvīracaritam of Bhavabhūti*, edited by Todar MALL, 1928. Altogether 18 Mss. have been collated : T₁₋₄ for Act I only ; K E W Sc I₂ Mr are complete ; I₁ Bo Alw and Md end with Act V ;

Cu Mt Mg 'break' with the 46th verse of Act V; B was available for the last act & Scripts: Telugu (Mt T₁ T₂), Grantha (Mg Mr T₃ T₄), Kāṣṭhī (K), Devanāgarī all the rest. The Northern Recension is dividinto four minor groups as follows: 1₁¹⁷ Bo: W¹⁹ Sc¹⁹ I₂¹⁹; Alw M and Ca¹⁷ K B E. The Southern Recension is constituted on T₁; Mr and Mg.

✓ *Mālatīmādhavay Bhavabhūti*, edited by R. G. BHANDARKAR, 1st ed. 1876, 2nd ed. 18. The first edition stands collated from the following: (A¹⁰), B¹⁰, D, E¹⁷, G and N. A is the Calcutta edition of Kailasachandra Dā; N is in Telugu characters; rest in Devanāgarī. (A) C N collated throughout, B up to middle of Act X only; D used up to middle of Act VI and replaced thereafter by E; G used in Act VIII where E shows a lacuna, and in X where B breaks off. All Mss. are independent of one another, but A D and B C appear to form groups. N agrees more with B C, and E with A D. Thus there are two major groups D E and B C N with G standing between them. For the second edition the following additional Mss. have been used: Bh¹⁸, K₁, K₂ (inśaradā script), O¹⁷. Thus collation stands from nine Mss. (A) C B D (E G) Bh. K₁ K₂ O. According to BHANDARKAR all nine are independent of each other and do not allow themselves to be classified into a *stemma*. The smaller groups are, however, represented by K₁ K₂, N O, and the larger by K₁ K₂ N O, and A B Bh C D. The commentary of Jagaddhara: Cj¹⁸. On this basis it should be possible to trace the genealogy of these Mss.

Paramātmaprakāśa of Yogindu, edited by A. N. UPADHYE, 1937, on the basis of the following Mss.: A¹⁶ B¹⁸ C¹⁷ P¹⁹ Q¹⁹ R¹⁹ S T K M. The Shorter Recension is represented by *K¹ from which are descended T(M) and K; the Longer Recension is represented by *P¹ from which are derived P (R is contaminated with K as well as with the text of Brahmaeva) or the text of Bālacandra's commentary on the one hand, and I C and S or the text of Brahmadeva, with Q as a *misch-codex* deriving from K and B C S.

✓ *Rāmāyaṇa*. The problems connected with the critical recension of this epic were first dealt with by the late Prof. JACOB and recently by Dr. RUBEN in his *Judien*. An attempt to edit it critically is being made by Dr. Raghu VIRA of the International Academy of Indian Culture at Lahore and a trial fascicle has been published without either a Prolegomena or even a bare description of the critical apparatus and the interrelationship between the various recensions of the epic. Perhaps it is reserved for the final volume. A critical edition of the North-Western Recension has been brought out by the D. A. V. College authorities of Lahore, but the reply of SUKTHANKAR to those of his European critics who suggested that before any attempt is made to consti-

to the final text of the Great Epic, the critical editions of all the different versions or recensions should be made, holds good in this case. Such critical editions naturally include much secondary readings and these are hard to detect unless the evidence of all extant Mss. belonging to different recensions and versions is taken into account. RUBEN's findings may be summarised here. Like the *Mahābhārata*, the *Rāmāyaṇa* Mss. divide themselves into two recensions, the Northern and the Southern, and these again subdivide themselves into two versions each. Thus the Northern Recension comprises the North-Western and the North-Eastern Versions, and the Southern Recension comprises the Version of the *Aṃṭakatakaṭikā* and the Version of the Commentary of Rāmānuja. RUBEN believes that unlike the Mbh. tradition the Rām. Mss. cannot be divided into groups corresponding to their scripts. The Bengali Version was printed by GORRESIO in the *editio princeps* of this text since 1843.

Rāmāyaṇa of *Vālmīki* (in its North-Western Recension): Sundarakaṇḍa, edited by Vishvabandhu SHASTRI, Lahore, 1940. Based on 10 Mss. : A¹⁶, F A¹⁸, C¹⁸, B¹⁸, L₁¹⁹, L₂¹⁹, P¹⁹, R¹⁹ and M¹⁹. According to the Editor all these represent a unitary version, but the question how far it is a uniform, non-conflate version, is not evident from the present edition. The Editor has indicated in his Preface his reaction to Dr. S. K. DE's review of the earlier parts, but missed the purport of SUKTHANKAR's remarks about critical editions of any versions which are not entirely free from conflation.

Suvarṇabhāṣottamasūtra, herausgegeben von Johannes NOBEL, Leipzig 1937. The edition is based on seven Mss. A B¹⁸ C D E¹⁹ F and G. The first six are paper Mss. in Nepali script and G is a palm-leaf Ms. in the same script. By their common faults and common corrections the paper Mss. form into one group as against G. Even within the major group CF are more nearly related, and in a large number of cases CF stand apart from BDE; as far as the title of the work is concerned BDE have *Suvarṇaprabhāṣottamasūtrarāja* as against ACF (and G) which have *Suvarṇa(pra)bhāṣottamasūtreन्द्रarāja*. In addition the fragments of Sanskrit texts found in Central Asia contain part of our text, of immense value for the constitution of the text in view of their age and greater purity: for parts of chapters XIII and XIV those recovered by Senator Otto DONNER during 1906-1908 and edited by J. N. REUTER; another part edited by F. W. THOMAS in HOERNLE's *Manuscript Remains of Buddhist literature found in Eastern Turkestan*, Vol. I, covering parts of Chapters V and XIII; those edited by N. D. MIRONOV covering parts of Chapters III, VI, VII and VIII; these are respectively indicated by the sigla R, H and M; HMR agree in great measure with G. As *testimonia* the editor has utilised Chinese and Tibetan translations :—(1) Chinese translations : of Dhar-

makṣema (c. 414-433), I-tsing (c. 700); Tibetan translations: Tib. I (between 705-55 A.D.), Tib. II and Tib. III (between 804-16). In addition there is in the Berlin Collection of Turfan Mss. a portion of the Khotan-Saka translation, edited by Sten KONOW. Further details regarding the evaluation of all these witnesses for the *constitutio textus* should be gathered from NOBEL's learned introduction.

SELECT BIBLIOGRAPHY ✓

This bibliography is only intended as a pointer to further studies in the methods of textual criticism as developed for various classes of problems connected with different types of literature and is therefore not meant to be exhaustive. Thus no reference is given, for instance, to the fruitful development of textual criticism as applied to Biblical studies.

A

BIRT, Theodor *Kritik und Hermeneutik*, München 1913 (Ivan VON MÜLLER's Handbuch der Altertumswissenschaft I²). A very formal treatise dealing in great detail with textual problems connected with Greek and Latin classics. It is meant only for advanced textual critics.

EDGERTON, F. *Pañcatantra Reconstructed* 1924: American Oriental Series Nos. 3-4. A useful and particularly well-illustrated book on the practical application of the doctrines of textual criticism to a class of problems which is not generally met with in Latin or Greek classics. Naturally the conclusions arrived at are important though somewhat controversial, particularly in opposition to those enumerated by HERTEL in his *Pañcatantra* (HOS. 11-14).

HALL, F. W. *Companion to Classical Texts*, Oxford 1913: is an excellent introduction to the subject, giving detailed account of the history of Greek and Latin Texts, and the principles of textual criticism applied to them cover pages 108-198.

HAVET, L. *Manuel de critique verbale appliquée aux textes latins*, Paris 1911. This is a major work in Latin textual criticism and contains most of the precious doctrines of textual criticism hidden in a mass of examples and therefore meant only for very critical readers.

JEBB, Sir Richard C. Textual Criticism, pp. 720-733 in *A Companion to Greek Studies*³ edited by Leonard WHIBLEY, Cambridge University Press 1916. A good account of the subject, indispensable for English readers.

MAAS, Paul. *Textkritik*, Leipzig 1927 (Einleitung in die Altertumswissenschaft herausgegeben von Alfred GERCKE and Eduard NORDEN 1²). One of the clearest and best books on the subject, giving succinctly and in algebraic formulæ all the fundamental principles of the subject illustrated at the end with some select examples. Very useful and suggestive.

POSTGATE, J. P. (1) Textual Criticism, pp. 791-805 of *A Companion to Latin Studies*² edited by Sir John Edwin SANDYS, Cambridge University Press 1913. (2) Textual Criticism in *Encyclopaedia Britannica*¹⁴ Vol. 22, pp. 6-11. Perhaps the most brilliant but short account of textual criticism in the English language.

RUBEN, Walter. *Studien zur Textgeschichte des Rāmāyaṇa*, Stuttgart 1936 (Bonner Orientalistische Studien Heft 19). Follows in great detail the lines laid down by SUKTHANKAR for the Mbh. as applied to the textual history of Rāmāyaṇa. Indispensable for critical students of the epic.

SUKTHANKAR, V. S. *Prolegomena* to the critical edition of the Ādi-parvan of the Mahābhārata, Poona 1933. A work of capital importance wherein the fundamental principles of textual criticism as applied to classical texts of Europe have been discussed *de novo* from the Indian standpoint and determined once for all for conditions which have not come within the experience of textual critics in the West. The basis of textual criticism for further work in Indian classics.

SUKTHANKAR, V. S. Epic Studies I-VIII : *JBBRAS* (NS) 4. 157-178 ; *Annals BORI* 11.165-191, 259-283 ; 16.90-113 ; 17.185-202 ; 18.1-76 ; 19.201-262 ; *Kane Festschrift* 472-487 ; Epic Questions, I. *Bulletin DCRI* 1.1-7. These studies attempt to answer with great precision and in detail some of the fundamental criticisms which were levelled against the principles which SUKTHANKAR had evolved or their application in particular contexts, and are consequently of inestimable help to students of textual criticism. They are lucid, to the point, and illuminating many dark corners of the subject which could not be properly dealt with in detail in the *Prolegomena*.

B

Besides the works mentioned under A above, the following have been utilized in the preparation of this work :

BHANDARKAR, R. G. *Mālatīmādhava*—2nd edition, Bombay 1905.

- BÜHLER, G. *Indische Palaeographie*, Strassburg, 1896. Translation in English, as revised by FLEET, has appeared as a supplement in the *Indian Antiquary* for 1904, without plates.
- DE, S. K., *Udyogaparran* of the critical edition of the Mahābhārata, Poona 1939-40.
- KONOW, Sten, *Karpūramañjarī*, Harvard 1901 (HOS. 4).
- MALL, 'Todar, *Mahāvīracarita*, Oxford 1928.
- PISCHEL, R., *Sakuntalā*—2nd edition, Harvard 1921 (HOS. 16).
- WINTERNITZ, *History of Indian Literature*, Calcutta.

